Canada's Health Promotion Survey

Technical Report

Canada

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Health and Welfare Canada
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Preface

This report describes the major findings of Canada's Health Promotion Survey (HPS) conducted in 1985 by Statistics Canada for the Health Promotion Directorate of Health and Welfare Canada. It is called a "Technical Report" since it is the most detailed and comprehensive report to be published on the survey. Nevertheless, it is not an exhaustive document and is complemented by several other reports. These include the reports in the *Active Health Series* which concentrate on implications for health promotion, and five reports in the *Technical Report Series* which focus on special topics and population groups.

One objective of this report is to describe the prevalence and distribution of a broad range of health practices which influence the health promotion and disease prevention prospects of Canadians. Many of these practices have been studied before — although never so comprehensively in one survey — and important data are reported here on changes in health behaviours over time. The novel contribution of this survey, however, is its data on attitudes, beliefs, intentions and knowledge related to health and healthful living. As described in Chapter 1, these topics have been organized into a framework which has both conceptual merit and practical application. Thus a second objective of the report is to describe the prevalence and distribution of these attitudes, beliefs and intentions.

If these first two objectives are achieved, the report should prove to be a useful resource document for planning health promotion and disease prevention programs. Additional analyses will be needed to exploit fully this data base, however. Consequently, a third objective is to illustrate the informative analyses that are possible by examining some of the relationships among health practices, health status, attitudes, beliefs, intentions and knowledge. Many of these innovative analyses are described in the report.

The report is organized into six distinct sections, grouping together chapters that deal with related topics. Chapters 3 to 15 present the survey findings and have a similar format. Each begins with highlights of the results and a brief description of the methods relevant to the topic. These chapters were prepared so they could be read independent of each other; nevertheless, prior exposure to a description of the survey's objectives, conceptual framework (Chapter 1) and methods (Chapter 2) is recommended. The reader who consumes the entire report may find Chapter 16 helpful in synthesizing the information presented here.

The Technical Report is the culmination of several years' work by a large number of people. The nine chapter authors are merely the most visible; they were assisted by expert reviewers who are acknowledged at the beginning of each chapter. The composition of the various advisory committees which guided the survey is identified in Appendix C. But the largest debt is owned to the 11,181 Canadians who willingly participated in the survey. Their co-operation and interest in health promotion are as encouraging as many of the findings in this report.

Those wishing to conduct their own analyses should note that the microdata file for Canada's Health Promotion Survey is available from Statistics Canada at a cost of $500. Tabulations can be obtained at a cost that will reflect the resources required to produce the tabulation. For more information write to:

Statistics Canada
Household Surveys Division
Jean Talon Building 5-D
Tunney's Pasture
Ottawa, Ontario
K1A 0T6

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Section

This section contains two chapters dealing with the overall framework and design of Canada's Health Promotion Survey. These two chapters provide a foundation for understanding and interpreting the rest of the report.

In Chapter one, Irving Rootman provides background on the survey's development, purpose, objectives and conceptual framework.

The focus of Chapter two, by Gary Catlin, is on methodology. Among other things, he discusses survey design, survey procedures, non-response and data analysis issues.

1

Canada's Health Promotion Survey

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Canada's Health Promotion Survey

What do Canadians do to promote their health? Do they eat properly, exercise, follow good safety and prevention practices, avoid tobacco, drugs and alcohol? What kind of attitudes do they have toward health and how much knowledge do they possess? Moreover, how are their health practices related to one another and to their attitudes and knowledge?

Canada's Health Promotion Survey was designed to answer these questions. In doing so, it will provide the public and those working in the health field with a considerable amount of new information. These data, in turn, will be used to plan and evaluate programs and to inform health professionals and the public in ways which will enable Canadians to maintain or improve their health.

The survey was carried out for the first time in June 1985, allowing more than 11,000 Canadians to speak about issues relevant to the promotion of health. They did so with great enthusiasm and candour, providing a comprehensive and accurate picture of their knowledge, attitudes and practices in the area of health. A similar opportunity will be given to Canadians in the future when the survey is conducted again.

Background

Planning for this survey began in early 1982 when the Health Promotion Directorate was granted a new mandate to implement a national program to promote the health of Canadians.

This program proposed to focus on a number of issues of concern to health promotion, including: nutrition, smoking, alcohol use, drug use, safety and mental health. The program also identified a number of target groups for priority attention, namely, children and youth, women, the elderly, the handicapped and chronically ill, non-status Indians and Metis, and the poor. Furthermore, it established four strategies to be applied in varying degrees to each issue or target group:

- informing and equipping the public to deal with lifestyle issues;
- promoting a social climate that supports healthy behaviour;
- encouraging self-help and citizen participation in health promotion; and
- stimulating the adoption of health, education, welfare and other policies and programs that emphasize health promotion.

Those involved in the Health Promotion Program's early development agreed that a national survey would provide the program with some of the critical information it needed for its further development and evaluation.

An extended period of consultation with Directorate staff, provincial government representatives and researchers resulted in a clarification of the purposes and objectives of the survey and in an identification of the information needs to be satisfied. At the same time, the survey was designed and various survey methods were tested, culminating in the final design described in detail in Chapter 2.

Purposes and objectives of survey

The primary purpose of Canada's Health Promotion Survey was to provide information for planning and development of the Health Promotion Program.

The secondary purposes were to provide information for:

- evaluating the Health Promotion Directorate program;
- communicating with the public; and
- planning, developing and evaluating other health promotion programs in Canada.

The program objectives of the survey were to:

- contribute to the development of more effective initiatives which will promote the health of Canadians;
- disseminate information from the survey to researchers, workers in the health promotion field and to the Canadian public;
- provide a baseline for evaluating future health promotion efforts in Canada; and
- provide norms which can be used to compare local estimates of health knowledge, attitudes and practices with provincial and national estimates.

Bearing in mind that the survey will be conducted once again, and that such action is necessary to meet some of the objectives of an evaluative nature, it is nevertheless essential to specify the objectives of the first phase conducted in 1985. These were to determine the:

- *prevalence* of health knowledge, beliefs, attitudes, intentions, behaviours and status in the Canadian adult population;
- *distribution* of health knowledge, beliefs, attitudes, intentions, behaviours and status;
- *correlates* of health knowledge, beliefs, attitudes, intentions, behaviours and status;

- *relationships* between health knowledge, beliefs, attitudes, intentions, behaviours and status; and the
- *interrelationships* among health behaviours.

Each of these objectives is aimed at developing more effective and more efficient health promotion programs. For example, information about the prevalence of health characteristics is essential for identification of issues for priority attention. Information about the distribution of these characteristics contributes to the identification of target groups for health promotion efforts. Determining the correlates, relationships and interrelationships will lead to the development of innovative and more efficient approaches. Thus, it is expected that the successful achievement of these research objectives will be important to the field of health promotion in Canada.

Conceptual framework

The conceptual framework for the Health Promotion Survey is illustrated in Figure A. It is based on a review of a number of conceptual frameworks including the Precede Model,[1] the Information Processing Model,[2] the Health Belief Model,[3] the Problem Behaviour Model,[4] the Canada Health Survey Model,[5] and the Canada Fitness Survey Model.[6] Although it draws elements from each of these models, it is identical to none and was designed specifically for the Health Promotion Survey. Its main purposes are to link the survey with the Health Promotion Program, to isolate the domain of the survey and to organize the information collected by the survey.

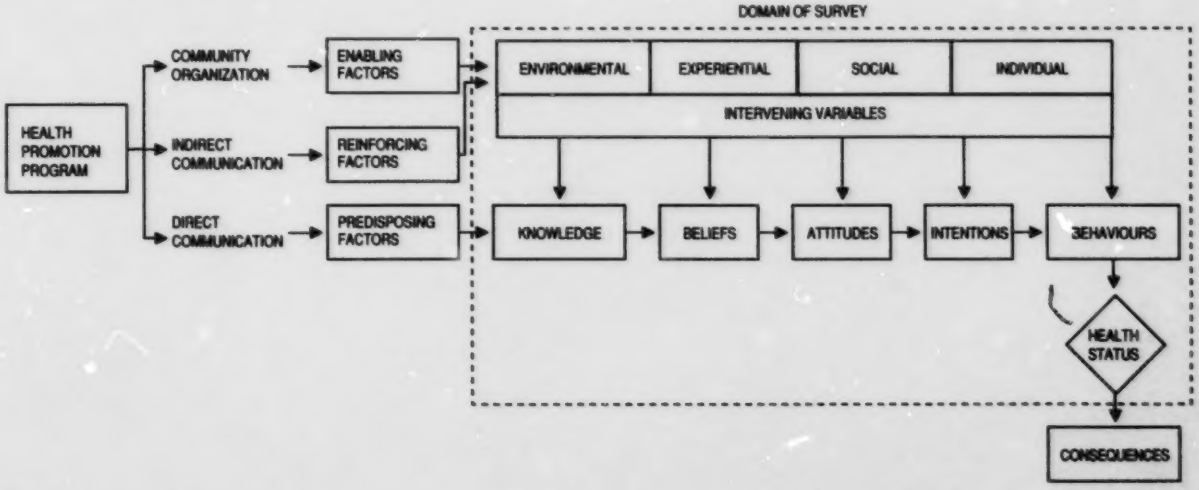
The Health Promotion Program is posited as the starting point in a causal chain. It effects its impacts through community organization, indirect communication and direct communication.

Community organization is exemplified by the Directorate's strategy of encouraging self-help and citizen participation. Community organization has an influence on "enabling factors" such as resources, skills, alternatives and programs.

Indirect communication is encompassed within the Directorate's strategies for providing a supportive social environment and for stimulating adoption of supportive policies. Indirect communication has an impact on "reinforcing factors" such as public policies and the attitudes and behaviours of others.

Direct communication is linked to the Directorate's strategy of informing and equipping the public with the necessary tools. Direct communication affects

FIGURE A: **CONCEPTUAL FRAMEWORK: HEALTH PROMOTION SURVEY**



"predisposing factors" such as exposure, awareness, knowledge, beliefs, attitudes and intentions. The "predisposing factors" in turn are presumed to affect behaviour. The "enabling" and "reinforcing factors" work indirectly through acting on environmental and experiential variables which, together with social and individual variables, interact to affect knowledge, beliefs, attitudes, intentions and behaviours. Behaviours have an impact on health status which, finally, has an impact on consequences.

Domain of the survey

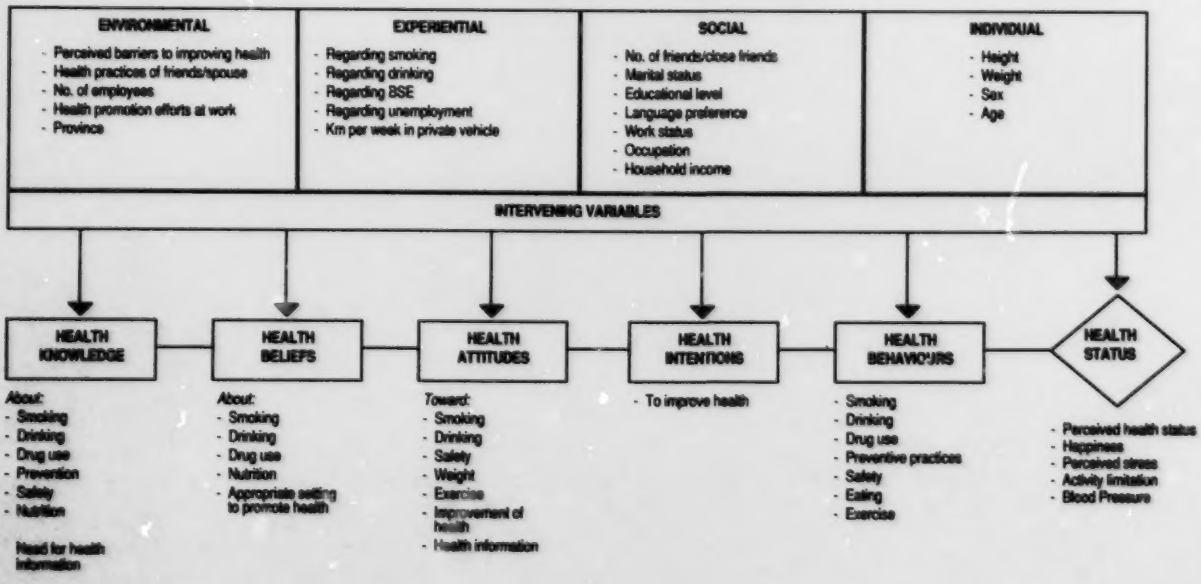
Any one survey is inadequate for measuring all of the types of variables indicated in the framework. The variables in the domain of the Health Promotion Survey are those within the dotted lines (Figure A). The categories shown in Figure B provide a reasonable structure within which the specific variables measured by the survey can be organized.

Thus, the Health Promotion Survey permits an up-to-date description of various aspects of the health status of Canadians, including such topics as self-assessed health, happiness and activity limitation. It also permits a description of the health behaviours of Canadians in such areas as exercise and smoking, and a description of how these behaviours and health status are related. Finally, and perhaps most importantly, the survey will permit a description of the knowledge, attitudes, beliefs and intentions of Canadians in each of these areas.

Relation to other surveys

In recent years there have been a number of surveys conducted in Canada dealing with some of those matters covered by Canada's Health Promotion Survey. The key surveys are: the Canada Health Survey, the General Social Survey, the Canada Fitness Survey, the Labour Force Survey Supplements on Smoking, the Canada Student Health Surveys and various provincial and local surveys. Canada's Health Promotion Survey (HPS) is intentionally and systematically related to all of these surveys, yet it covers several important areas that have not been included in previous investigations. Thus, the HPS was designed to both build upon the existing knowledge base and to expand it into new topics. Moreover, because of an emerging consensus on question wording, it is possible to make comparisons with other surveys such as the Canadian Health and Disability Survey[7] (Chapter 14), or the U.S. National Health Interview Supplement on Health Promotion and Disease Prevention[8,9] (Chapters 7 and 8).

FIGURE B: **CONCEPTUAL FRAMEWORK AND VARIABLES: HEALTH PROMOTION SURVEY**



Canada Health Survey

The Canada Health Survey[5] collected detailed information on the health status and health practices of Canadians in 1978-79 using a variety of procedures including a self-administered questionnaire. Similar information collected in Canada's Health Promotion Survey provides an indication of changes in the health status (Chapter 14) and health practices (Chapters 6, 7) of Canadians over the past six years. The Canada Health Survey, however, provided no information on health knowledge, beliefs, attitudes or intentions, all of which are essential to program development (Chapter 15). In that sense, the Health Promotion Survey represents an important continuation and extension of the information base developed in the Canada Health Survey.

Canada Fitness Survey

The Canada Fitness Survey[6] was conducted in 1981 and questioned Canadians about some of the health practices covered in the Health Promotion Survey. Again, the areas in common (exercise, smoking and alcohol use) and the deliberately similar questionnaire wording permit comparisons of change over time in the health behaviours of Canadians (Chapter 12). The Canada Fitness Survey obtained no information on health knowledge and intentions, and focused on physical fitness rather than general health status.

Canada Student Health Surveys

A survey of the health knowledge of a national sample of school children in Grades 4, 7 and 10 was carried out by the Social Program Evaluation Group at Queen's University in 1982.[10] A similarly designed survey of health attitudes and behaviours was conducted by the same group in 1984.[11] Both surveys involved questionnaires filled out in the classroom. They help to complete the picture provided by the Health Promotion Survey as they cover younger Canadians, whereas respondents to the Health Promotion Survey were age 15 and over. Together, the Canada Student Health Surveys and the Health Promotion Survey provide a comprehensive national health promotion data base.

General Social Survey

In September 1985, Statistics Canada carried out the first General Social Survey.[12] A major focus of this survey was health, and, more particularly, health status, selected health behaviours and social support. Many of its questions were drawn from the Canada Health Survey and the Health Promotion Survey. Accordingly, it will be possible to make some comparisons between the General Social Survey and the Health Promotion Survey. The design of the former may even make it possible to study seasonal variations in behaviours. As was true of the Canada Health Survey, the General Social Survey did not obtain information on health knowledge, attitudes, beliefs or intentions and so is in a less favourable position than the Health Promotion Survey to "explain" health status.

Labour Force Survey Supplements on Smoking

Since 1964, Health and Welfare Canada has been conducting regular surveys of the smoking practices of Canadians, by way of a supplement to the Labour Force Survey.[13] These surveys, which involve personal interviews with respondents or their proxy, provide historical information on one of the types of behaviour covered by the Health Promotion Survey. Some comparisons may again be possible since questionnaire wording is intentionally similar. The Health Promotion Survey has the advantage of direct (non-proxy) reports. Furthermore, it contains data on correlated variables such as knowledge (Chapter 3).

Provincial and Local Surveys

There have been numerous local and provincial surveys dealing with various aspects of health promotion in the past few years in Canada. Examples include surveys carried out by the Toronto and Ottawa Health Departments[14,15,16] which were based largely on the Canada Health Survey, as well as surveys of adults in Ontario.[17] Some of the questions used in these surveys are comparable to those used in Canada's Health Promotion Survey, thus permitting some comparisons to be made. In addition, the federal Laboratory Centre for Disease Control has developed a Risk Factor Survey which is currently being tested by several health departments in Canada and will ultimately be made available for general use. These surveys, together with the Health Promotion Survey, provide a growing set of health promotion norms at the national, regional and local levels. Indeed, the first example of this is the Edmonton Supplement to the Health Promotion Survey. Sponsored by that city's Board of Health, the Supplement ensured that a representative sample was contacted. The resulting data[18] can be analysed with Alberta or Canada-wide findings for comparison purposes.

Overview of this report

This report is one of several to provide the most important findings of Canada's Health Promotion Survey. The abundance of information collected by the survey makes it impossible for one single document to exploit all the possibilities and thoroughly

cover all topics. The objective of this technical report therefore, is mainly to describe the prevalence and distribution of health practices, attitudes, beliefs, and intentions, and also to begin the examination of relationships among health practices, between practices and health status, and between practices and attitudes.

Chapters 3 to 12 describe the prevalence of key health practices as well as their distribution in the population. Age, sex, province of residence, and education or income are the variables typically used throughout these chapters to examine variation in practices.

Relationships among health practices are dealt with most comprehensively in Chapter 13. Relationships appear among sub-sets of behaviours in many other chapters: e.g., between the use of drugs, alcohol, and tobacco (Chapter 5); and between driving after drinking, seatbelt use, and marijuana consumption (Chapter 8).

Similarly, Chapter 13 treats at greatest length the relationship between health practices and health status, but this topic comes up elsewhere: e.g., in Chapter 12 regarding exercise and in Chapter 14 concerning smoking and overweight as they affect health.

Differences in attitudes or beliefs between followers and non-followers of a health practice have important implications for health promotion. These differences exist between smokers and non-smokers (Chapter 3) and regular versus irregular exercisers (Chapter 12). Knowledge as it relates to the practice of breast self-examination is reported in Chapter 7.

The role of the social environment is recognized in the conceptual model. Its impact is seen in the strong association between the behaviour of friends and one's own alcohol use (Chapter 4) or exercise patterns (Chapter 12). Number and quality of friendships are related to drug use (Chapter 5) and to happiness (Chapter 14).

None of these analyses, beyond the descriptions of prevalence and distribution, is intended to exhaust the possibilities, but only to illustrate the potential of the data base. While the Health Promotion Directorate will be publishing additional reports based on the survey, readers should note that a public use data tape is available for purchase from Statistics Canada. Only a widespread and concerted effort by researchers from a variety of perspectives will be able to exploit fully this information resource. Some illustration of these perspectives is provided by the nine chapter authors, who were given a relatively free hand in their analysis of Canada's Health Promotion Survey.

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2

Survey Methods

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Introduction

The Health Promotion Survey (HPS) was a national telephone survey. It was conducted in the ten provinces and Yukon Territory during June 1985, with interviewing conducted from nine centralized telephone facilities across the country. The subject matter of the HPS is particularly amenable to telephone surveying as it is a concern of most people.

Because of difficulties in undertaking a telephone survey in the Northwest Territories, the population there was interviewed face to face. These data are not included in this report.

The survey design, data collection, and computer processing were the responsibility of Statistics Canada, whose representatives worked closely with those of the survey sponsor, the Health Promotion Directorate of Health and Welfare Canada.

Population

The target population for the Health Promotion Survey was all persons 15 years of age and over living in Canada, with two exclusions. We did not attempt to cover residents of the Northwest Territories or full-time residents of institutions. The NWT was excluded due to the significant percentage of the population without telephones, particularly outside the major communities. Residents of institutions such as prisons or hospitals were excluded due to the fact that their situation differs markedly from that of the general population. Furthermore, it would have been extremely difficult to conduct interviews with the residents. This is a typical exclusion for this type of survey.

The sampling method employed in the HPS was random digit dialing (RDD). As a result, households without telephones were not covered by the sampling frame. Approximately 3% of households in Canada do not have telephones and their characteristics differ markedly from the general population. Data collected in 1984 indicate that persons in these households tend to be young, male, single and less educated than the general population.[1]

The small number of non-telephone households means that their exclusion will not result in a major bias in the data collected by most surveys. Table A compares estimates of selected demographic variables from the January 1984 Canadian Labour Force Survey (LFS), controlling for telephone ownership of the household. The estimates for the total population and the telephone population are almost imperceptibly different, although it is obvious that non-telephone households are very different. The exclusion of this group from the HPS should, however, be kept in mind when small sub-groups of the population, with characteristics similar to the non-telephone group, are being analysed. For example, if young, single, non-working males are being analysed, the percentage not represented will have a greater impact on results. The estimates from the Health Promotion Survey have been adjusted (weighted) to include persons without telephones.

TABLE A: **COMPARISON OF TELEPHONE AND NON-TELEPHONE OWNERS IN THE LABOUR FORCE SURVEY POPULATION, BY SELECTED DEMOGRAPHIC CHARACTERISTICS, AGE 15+, CANADA, 1984**

	Total	Telephone-Owning	Non Telephone-Owning
Population 15+ (000's)	19,041 (100%)	18,574 (97.55%)	467 (2.45%)
SEX			
Men	48.9	48.7	56.1
Women	51.1	51.3	43.9
MARITAL STATUS			
Married	62.0	62.6	38.0
Single	27.2	26.8	43.5
Widowed	5.8	5.8	6.4
Divorced or Separated	5.0	4.8	12.1
AGE			
15-19	10.7	10.7	10.5
20-24	12.3	12.1	17.3
25-29	11.7	11.6	13.9
30-34	10.9	11.0	10.1
35-39	9.7	9.8	6.9
40-44	7.6	7.7	5.3
45-54	13.0	13.1	8.8
55-64	11.8	11.9	10.0
65+	12.8	12.1	17.0
EDUCATION			
0-8 years	20.3	19.9	38.5
High School	49.8	49.8	49.0
Some Post-secondary	9.0	9.1	4.3
Post-secondary Certificate or Diploma	11.2	11.4	4.9
University Degree	9.6	9.8	3.4

Survey design

The HPS employed two different RDD sampling techniques — one for the ten provinces and one for Yukon Territory. Both approaches increase the proportion of household telephone numbers reached of the total telephone numbers dialed to reduce the cost of the survey compared to "pure" random digit dialing.

In the ten provinces, we employed the Waksberg-Mitofsky[2] design, a two-stage cluster sample of telephone numbers. At the first stage, a list of all telephone area codes and prefixes is prepared for the survey coverage area. To these, all possible next two digits are appended to form banks of telephone numbers (e.g., 613-224-00, 613-224-01, 613-224-02, etc.). These form the primary selection units (PSU). Random selections are made from these banks and a randomly-generated two-digit number is added to each number to form a telephone number which is called. If the number dialed reaches a household, the PSU is retained; it is discarded if a business or an institution is reached. At the second stage, a predetermined number of households is called in each PSU retained. The probability of selection at the first stage is proportional to the number of working household numbers in the PSU. At the second stage, the probability of selection is inversely proportional to the number of working household numbers in the series. The design therefore yields an equal probability sample of household numbers.

In Yukon Territory, we obtained information which allowed us to define banks of telephone numbers containing households prior to the survey. This permitted us to eliminate the first stage of the Waksberg-Mitofsky design. Therefore we were able to directly generate telephone numbers within these banks to produce a simple random sample of households.

The proportion of telephone numbers that reached households varied from as low as 21% in Newfoundland to 55% in Quebec. In Yukon Territory, approximately 17% of the telephone numbers dialed reached a household.

The final stage of sampling was at the household level. After determining household membership from the person answering the telephone, the interviewers randomly selected one respondent from the members 15 years of age and older. The members were listed in order from oldest to youngest and each questionnaire was affixed with a label that indicated which person to select, based on the number of household members 15 years or older. Surveys that do not randomly select tend to have an over-representation of the types of individuals which are easy to reach.

Sample and response

Two considerations governed the sample design. On one hand, good national estimates of the distribution of various characteristics are needed for use by the federal government and national associations. On the other hand, since much of the policy and program activity in health is at the provincial and territorial level, better quality data are required at this level than are typically available from a national household survey. The sample was therefore allocated equally to the 10 provinces and Yukon Territory (1,000 each). The exception was Alberta, which had a target sample of 3,300. The additional sample of 2,300 was located in Edmonton, and the cost of this supplement was borne by that city's Local Board of Health.[3]

Table B shows the results of the stages of contacting the survey respondents. The overall response rate was 81.9%. This is calculated as the number of residential telephone numbers identified as a percentage of total numbers dialed. The target of 1,000 respondents in each province was not achieved due to a combination of a lower percentage of households contacted and a lower response rate than expected. As is generally true in household surveys, a disproportionate number of non-respondents were male and young (i.e., aged 15-24 years). This has been taken into account in calculating the sample weights. Thus, all results in this report use weighted data, reflecting the composition of the Canadian population as it was estimated to be in 1985, including demographic changes since the 1981 Census. There is no way of knowing if non-respondents differ from respondents in their behaviour, attitudes or knowledge.

TABLE B: **CONTACTS AND RESPONSE RATE, BY PROVINCE, HEALTH PROMOTION SURVEY, CANADA, 1985**

	Numbers Called	Households Identified (as % of Numbers Called)	Responses	Response Rate (as % of Households Identified)
Newfoundland	4,926	1,043 (21%)	849	81%
P.E.I.	3,121	1,105 (35%)	928	84%
Nova Scotia	3,036	1,069 (35%)	920	86%
New Brunswick	2,720	1,113 (41%)	956	86%
Quebec	1,874.	1,010 (54%)	846	84%
Ontario	2,223	1,046 (47%)	756	72%
Manitoba	3,674	1,008 (27%)	830	82%
Saskatchewan	4,510	948 (21%)	774	82%
Alberta*	7,128	3,359 (47%)	2,733	81%
B.C.	2,188	1,091 (50%)	899	82%
Yukon	4,957	857 (17%)	690	81%
Total	40,357	13,649 (34%)	11,181	82%

* The Alberta sample was supplemented by the Edmonton Local Board of Health.

Survey procedures

Data collection

Telephone interviewing has been shown to provide a cost-efficient alternative to face-to-face interviewing without sacrificing the quality of data collected.[4] Interviewing for the survey was conducted from centralized telephone interviewing locations in Statistics Canada's eight regional offices and from a temporary office in Whitehorse. All interviewing took place during the hours of 8:30 a.m. to 9:30 p.m. between June 3 and June 21, 1985. Interviewers were trained in both telephone interviewing techniques and procedures specific to the HPS during a two-day training session prior to the survey. Appendix B contains the survey questionnaire.

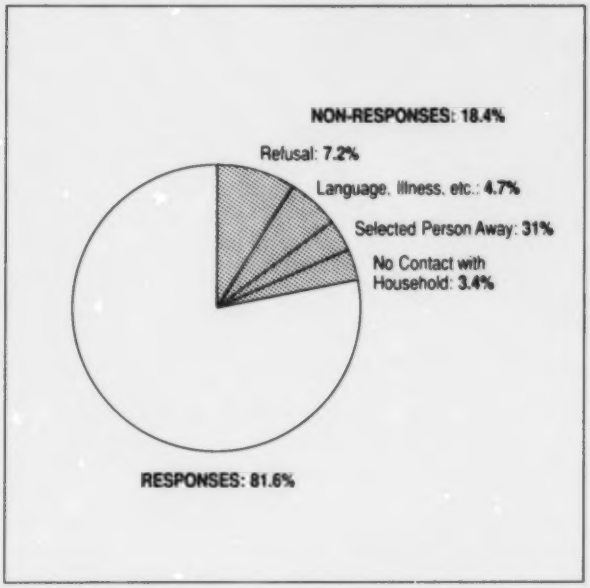
Many of the survey questions concerned attitudes or knowledge. For this reason, no proxy reporting was accepted. Telephone calls, 15 to 20 for each interview in some cases, were made at various times of the day and evening to complete each interview. Interviewers were monitored by a supervisor on a daily basis to ensure the quality of interviewing.

The response rate of 81% for the Health Promotion Survey was good for a survey requiring the random selection of a respondent and non-proxy reporting. As indicated in Table B, the response rate varied across the provinces, with the Maritimes achieving an excellent response rate while the rate for Ontario was quite low. We attribute the variation across the country to the experience of the regional office staff with telephone interviewing rather than to any regional variation in respondents or population.

The type of non-response experienced in the survey is shown in Figure A. Refusals accounted for almost 8% with most occurring at the outset of the telephone conversation. Once a respondent had actually begun an interview, however, it was very unusual for him/her not to co-operate for the complete survey.

Non-response due to language, illness or absence of the selected person is a problem inherent in a survey that does not allow proxy reporting. In Canada's Health Promotion Survey, once a respondent was selected, if she/he could not complete the interview, no replacement was made. In some cases, the selected person could not communicate in either English or French even though another household member was able to respond. We did not permit an interviewer to translate our questions into another language or to have another household member act as an interpreter due to the types of questions in the survey. The questions were worded in a specific way and conducting "on-the-spot" translations may have resulted in attitudes and knowledge being reported that were not intended by the original wording of the questionnaire.

FIGURE A: **RESPONSE/NON-RESPONSE TO THE HEALTH PROMOTION SURVEY, CANADA, 1985**



The "no contact" type of non-response is a particular problem for RDD surveys. We could not be positive that these telephone numbers reached a residence that is eligible for the survey or an empty office or cottage which would have been excluded in any case. Every effort was made to call these numbers numerous times and we endeavoured to check with telephone companies concerning their status. However, the status of a residual 2-3% could not be determined and we assumed that most are working residential numbers.

Data processing

Upon completion of the interviewing phase, the survey information was transferred by hand onto minicomputers and transmitted electronically to Ottawa for further processing. All records were edited by computer according to specified rules to check for errors and inconsistencies. For example, if someone reported that he/she had taken a drink in the last 12 months in one question but left blank whether he/she had ever taken a drink, we corrected this inconsistency. Such edits were developed in consultation with the sponsor.

Since the HPS was based upon a sample of households, each responding household and person represented a number of other households and persons. The final stage of processing was the

calculation of a weight for each record that allowed population estimates to be produced. The average weight was 1,752.

Data analysis and release

The estimates derived from this survey were based on a sample of households. Somewhat different figures might have been obtained if a census of the total population had been taken using the same questionnaire, interviewers, supervisors, processing methods, etc. as those used in the sample survey. The difference between the estimates obtained from the sample and the results from a complete count taken under similar conditions is called the "sampling error of the estimate".

Although the exact sampling error of the estimate, as defined above, cannot be measured from sample results alone (otherwise a survey would be unnecessary), it is possible to estimate a statistical measure of sampling error from the sample data: the standard error. Using the standard error, confidence intervals for estimates (ignoring the effects of non-sampling error) may be obtained under the assumption that the estimates are normally distributed about the true population value. The chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and it is virtually certain that the differences would be less than three standard errors.

Because of the large variety of estimates that can be produced from a survey, the standard error is usually expressed relative to the estimate to which it pertains. The resulting measure, known as the "coefficient of variation of an estimate" (CV) is obtained by dividing the standard error of the estimate by the estimate itself. It is expressed as a percentage of the estimate.

Data published in the tables of this report have been reviewed for release according to the following criteria:

- unqualified – CV not larger than 16.5%;
- qualified – CV between 16.6% and 33.3% (marked * high sampling variability); and
- suppressed – CV greater than 33.3% (marked – not releaseable).

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Section

This section deals with consumption of tobacco, alcohol and drugs. Because of their profound and generally negative impact on human health, it is appropriate to speak here of "substance abuse". These topics, particularly smoking, have been fairly well studied in Canada, yet earlier surveys have typically been confined to describing behaviour. The HPS not only provides important updates on consumption practices, but also reports on attitudes and knowledge.

Chapter 3, by Pierre Lamarche, provides the latest Canadian data on the prevalence of smoking and compares these to trends over the past several years. In addition, he reports on the feelings of Canadians on second-hand smoke and the rights of non-smokers. For the first time for Canadian adults, knowledge of smoking-related issues is reported, including the effects of smoking on the fetus and the benefits of quitting after years of heavy smoking. These findings provide important baseline information to guide and evaluate public education campaigns.

Florence Andrews' chapter on alcohol use is a fitting companion-piece for the Tobacco Use chapter. It complements a description of alcohol-consumption patterns with findings on the social relationships of drinkers, tolerance of drunkenness, attitudes toward alcohol as an issue for government and personal intentions to change drinking behaviour. There are important implications here for health promotion programs aimed at encouraging moderation in drinking.

Chapter 5 is concerned with both legal and illegal drugs. Pierre Lamarche and Irving Rootman report on very different consumption patterns, and policy implications, for these two classes of substance. In addition to describing the population's use of sleeping pills, tranquillizers, stimulants, cannabis and cocaine, the authors report on Canadians' beliefs about the health effects of using marijuana and hashish.

3

Tobacco Use

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Acknowledgements: Thanks to Peggy Edwards, Paul Melia, Irving Rootman, and Reg Warren for reviewing an earlier draft of this chapter.

Highlights

- Two-thirds of Canadians do not smoke.
  - Young adults (25-34) smoke more than older Canadians.
  - The prevalence of smoking is highest among the least educated.
  - It is less prevalent in Saskatchewan and British Columbia than it is in Quebec, Newfoundland and the Yukon.
  - It is much more frequent among separated or divorced Canadians.
- Smokers are more likely to have friends and spouses who smoke than are non-smokers.
- The proportion of smokers has decreased 16% in twenty years.
  - More men have quit than women.
  - Women and men now show almost equal proportions of smokers; the difference between the sexes was 30% in 1965.
  - The decline of smoking is slowing down.
  - But support for anti-smoking action is very high.
- A large majority of Canadians report being adversely affected by "second-hand smoke".
  - But only about half of the proportion affected have asked someone to refrain from smoking in their presence.
  - More women than men report being affected but men ask others to refrain from smoking in their presence more frequently than women.
  - About one-half of all smokers report that someone has asked them not to smoke in the last year.
- Fewer than one in ten Canadians work in an environment where smoking is completely prohibited.
- Almost all Canadians think pregnant women should not smoke.
- The vast majority (including smokers) believe that working non-smokers should be provided with smoke-free areas.
- Most Canadians (including smokers) think that smokers should ask permission before smoking in the presence of others.
- Canadians believe that parents are an important role model and that children are more likely to take up smoking if parents smoke.
- Two-thirds of Canadians disagree with the statement that "Most non-smokers do not mind if someone smokes in their presence".
- Two-thirds also believe that smoking does not help you to stay slim.
- The same proportion believes that quitting smoking, even after ten years of heavy smoking, can be a factor in improving one's health.
- Canadians are divided on the issue of whether or not people are too concerned with smoking.

* now with Domrémy – Montréal, Ste-Geneviève, Québec

Introduction

The widespread use of tobacco among developed and, more recently, developing nations has become one of the most alarming public health problems of the twentieth century. It was therefore important that the HPS enquire about the use of tobacco by Canadians. The survey enquired about the smoking habits not only of respondents, but also of spouses and friends, and about a number of beliefs, attitudes and behaviours regarding smoking (Q. 27-35, Appendix B).

Because of emerging social norms disapproving of smoking, it is possible that rates of smoking are now slightly under-reported. Notwithstanding this, self-reporting is still the most cost-efficient method of evaluating smoking rates in a population. It is also the most commonly-used method, thus allowing comparisons with the findings of other surveys. It must be noted that a "proxy" measure – a respondent reporting someone else's smoking behaviour – is even less reliable than one's own self-report.[1]

Non-response or answers of "don't know" are not shown in most of these tables. With only one exception, such responses accounted for less than 1% of the total. The exception is the opinion question (Q. 31), where "no opinion" generally accounted for 5-7% of responses. This is discussed further under "Beliefs about Smoking".

It should be noted that the tables are not standardized for age, sex, or other such variables which are associated with smoking behaviour. This may have some influence on inter-provincial comparisons since some provinces have older populations than others. The effect is likely to be small, however, as explained in Appendix A.

Finally, since the survey relates only to cigarette smoking, pipe and cigar smokers are not represented among smokers.

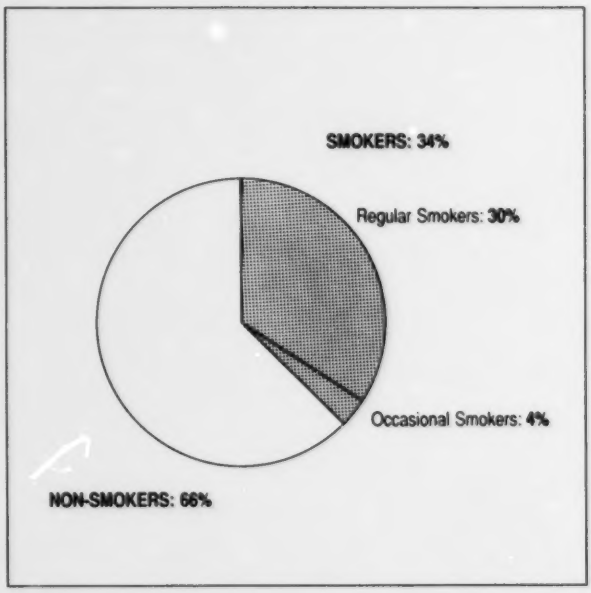
Prevalence of smoking

One-third (34%) of Canadians aged 15 years and older answered "yes" to the question: "At the present time, do you smoke cigarettes?" There are many more regular (usually everyday) (30%) than occasional (not everyday) smokers (4%) in the total population (Figure A). Men are more likely to be regular smokers (36%) than are women (32%).

Population patterns

Table 1 shows that the lowest prevalence of smoking is reported by those 65 years and older (19%). This is true both for men (20%) and women (18%). Women aged 65 and over show the smallest proportion of smokers among all age-sex groups. The 25-34 year-olds have the highest proportion of smokers (40%), and there are more women smokers in this age group (37%) than in any other. Smoking is predominantly a male habit, but the overall difference is only 3%. The only instance where the prevalence of smoking is higher among women than among men is in the 15-24 age group.

FIGURE A: **SMOKING STATUS, AGE 15+, CANADA, 1985**



The proportion of smokers varies inversely with education (Table 2). The highest proportion of smokers is found among those with the least education (37%) and the smallest proportion is found among respondents with the highest level of education (24%). There are no differences, however, between income categories with respect to the proportion of smokers, except for the second highest category, in which the proportion of smokers is slightly smaller.

As shown in Table 3, Saskatchewan and British Columbia have the lowest proportion of smokers (30% each). British Columbia shows the smallest proportion of regular smokers in all of Canada (27%). Quebec, Newfoundland and Yukon Territory show proportions of smokers much above the national average.

Smoking and social relations

Smokers are more likely to have spouses who smoke (32%) than are non-smokers (14%). In contrast, 26% of smokers have non-smoking spouses while this proportion is 48% among non-smokers (data not shown).

Similarly, smokers have more friends who smoke than do non-smokers. While 14% of non-smokers have no friends who smoke, only 3% of smokers have non-smoking friends exclusively. Eleven percent of non-smokers report that most or all of their friends smoke, compared to 32% of smokers.

While one out of every three Canadians smokes, one out of every two (50%) separated or divorced persons reports smoking. This is true both for men and women (data not shown).

Social norms

The HPS evaluated some social norms related to smoking. When asked: "Do you ever feel unpleasant effects from the cigarette smoke of others?", nearly two-thirds of Canadians (62%) answer yes, (73% of non-smokers and 42% of smokers). The proportion of Canadians who state they are affected by others smoking decreases with age from 68% for the 15-24 age group to a low of 47% for the 65-and-older category. Women are more affected by second-hand smoke (66%) than are men (59%). Almost three-quarters of women aged 15 to 24 are affected (see Figure B).

The proportion of Canadians who report being affected by others smoking increases with education, from 58% for the lowest education category to 72% for Canadians who hold a post-secondary degree (see Figure C). Within income categories, we find a similar pattern: the highest proportion reporting to be affected by others smoking is found among the two highest quintiles (71% in the fourth and 70% in the fifth quintile).

In all provinces a majority of the population reports being affected by others' smoke, although to a somewhat larger extent in Quebec (Figure D), a province that also has one of the highest proportions of smokers.

Over one-third of all Canadians (36%) have asked someone not to smoke (Q. 34). Men have done so as often as women, even though more women than men report being affected by smoke (Figure E). Although this question was asked of everyone in the survey, it is reasonable to assume that those persons bothered by smoke would be more likely to ask someone else to stop. Overall, about 59% of those bothered by smoke have asked another person not to smoke.

As is true of being affected by others' smoking, the proportion having asked someone to refrain from smoking decreases with age. While the 15-24 age group appears to be the most assertive (46%), the 65 years-and-older category is the least assertive (21%). Women are somewhat more assertive on this subject than men until the age of 45, after which men become more assertive about other people smoking (Figure E).

Turning to education, we find that 48% of Canadians with secondary education or more have asked smokers to refrain. Those in the lowest education category are least assertive (30%). Smokers in the higher income quintiles are also more assertive. There are 32% in the lowest income category who have asked someone not to smoke in contrast to 43% of the highest category (data not shown).

Figure D shows that the chances a smoker will be asked to refrain from smoking are higher in British Columbia and Alberta and lowest in the Atlantic provinces.

When asked: "In the past year has anyone asked you not to smoke around him/her?", almost one-half (47% for both sexes) of all smokers report that this has happened to them. The chances of this demand being made upon smokers is higher in Yukon Territory (57%), Ontario (52%) and British Columbia (49%), and is least likely in Newfoundland (35%) and Prince Edward Island (38% – data not shown).

Smokers under 45 years of age are asked more often to refrain from smoking than are older smokers. For example, more than one out of every two smokers in the 15-24 age category (51%) report having been asked to refrain while this proportion falls to one out of every three smokers in the 55-64 age group (35% – data not shown).

Smokers who have completed high school are the most likely (55%) to be asked not to smoke. The smallest proportion of smokers asked to refrain is found in the lowest education category (44%). With respect to income, smokers in the highest quintiles are those who have been asked most often to refrain from smoking: 57% for the highest quintile, and 56% for the fourth, compared to 38% for the second and 41% for the first quintile (data not shown).

The HPS also questioned Canadians about the location where they were asked, or have asked someone to refrain from smoking. Figure F shows that in both instances, one's own home is the most likely place where this occurs. Over one-fifth of smokers have been asked not to light up in someone else's home.

FIGURE B: **PERCENTAGE OF POPULATION WHICH HAS EXPERIENCED UNPLEASANT EFFECTS OF OTHER PEOPLE'S SMOKE, BY AGE AND SEX, AGE 15+, CANADA, 1985**

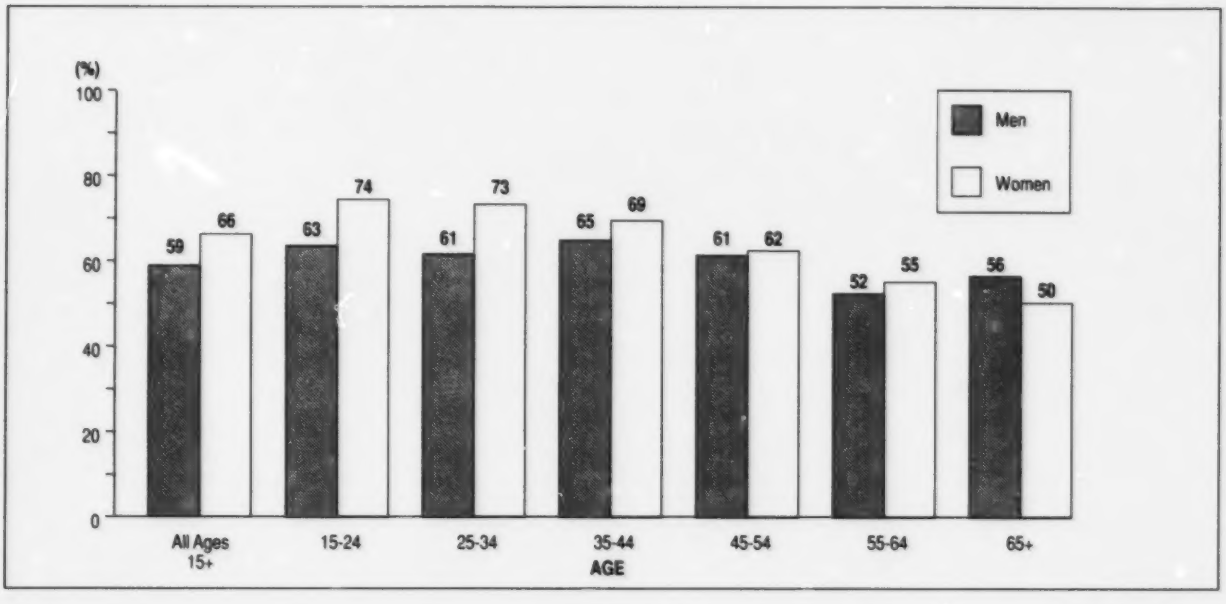


FIGURE C: **PERCENTAGE OF POPULATION WHICH HAS EXPERIENCED UNPLEASANT EFFECTS OF OTHER PEOPLE'S SMOKE AND PERCENTAGE WHICH HAS ASKED OTHERS NOT TO SMOKE, BY EDUCATION LEVEL, AGE 15+, CANADA, 1985**

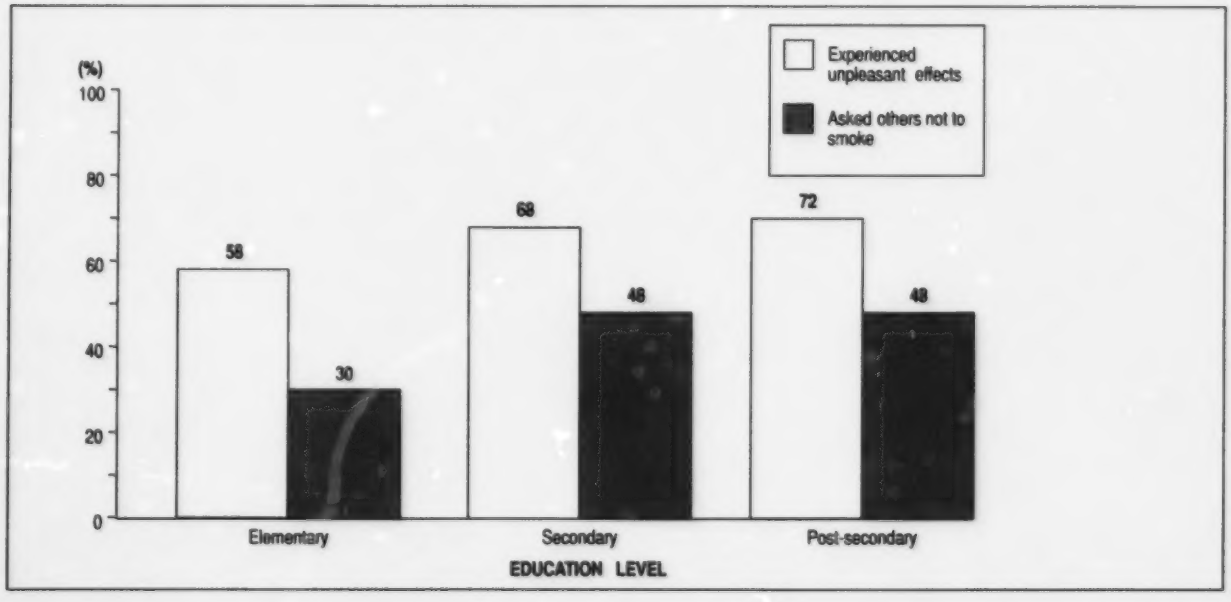


FIGURE D: **PERCENTAGE OF POPULATION WHICH HAS EXPERIENCED UNPLEASANT EFFECTS OF OTHER PEOPLE'S SMOKE AND PERCENTAGE WHICH HAS ASKED OTHERS NOT TO SMOKE, BY PROVINCE, AGE 15+, CANADA, 1985**

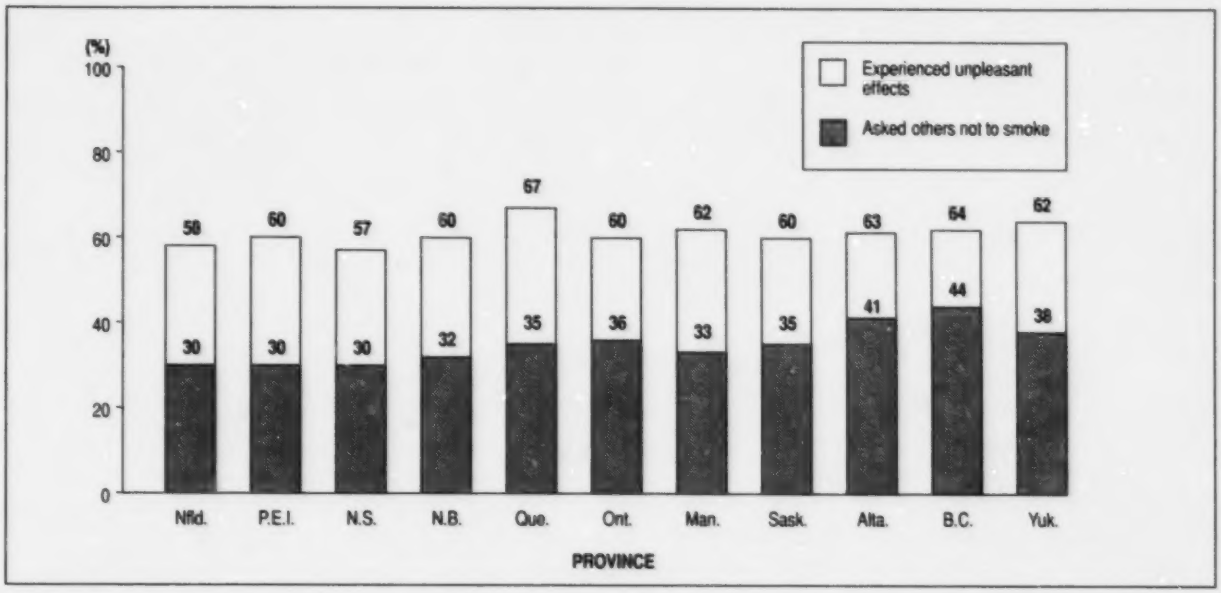
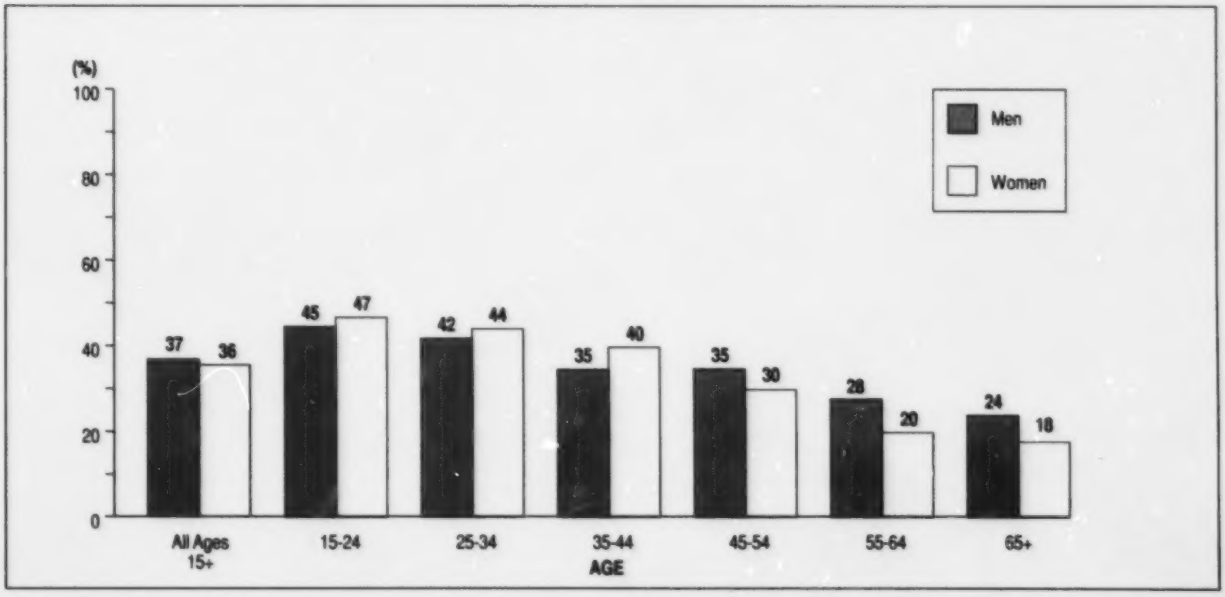


FIGURE E: **PERCENTAGE OF POPULATION WHICH HAS ASKED OTHERS NOT TO SMOKE, BY AGE AND SEX, AGE 15+, CANADA, 1985**



Finally, we asked Canadians: "Is smoking restricted in your place of work?" Only 7% of wage earners report that smoking is completely banned at work while 41% report working in an environment where smoking is prohibited in some places (see Table 4 for related information).

Beliefs about smoking

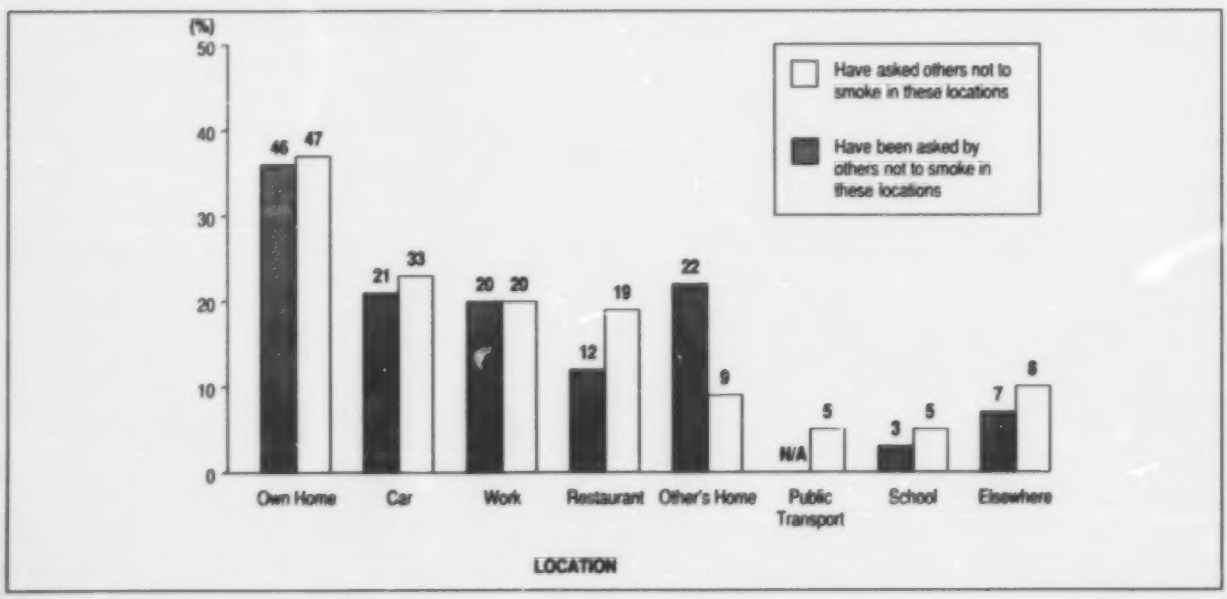
The survey also presented a number of statements to which respondents were asked to agree or disagree (Q. 31). These tapped both knowledge (parental influence, effect on fetus, weight control) and opinion.

Almost all Canadians (91%) realize that pregnant women should not smoke. More non-smokers (93%) than smokers (87%) support this statement (Table 5). Women and younger Canadians are slightly more likely to realize the danger to the fetus posed by smoking, but the differences are slight (Table 6). Agreement increases with education from 89% among those in the lowest education category to 95% in the highest (Table 7). Canadians in all provinces and Yukon Territory show very strong agreement with only small variations (Table 8).

Some seventy percent of Canadians agree with the statement: "Children are more likely to start smoking if their parents smoke". As with the other statements, more non-smokers (74%) than smokers (63%) agree (Table 5). In contrast to other statements, more men (73%) than women (68%) agree with the statement. Support was also stronger among the younger age groups (Table 6), and among Canadians of the highest education category (Table 7). There is strong consensus among residents of all provinces that children are more likely to start smoking, if their parents smoke, although to a lesser extent in Quebec (65%) and to a greater extent in Newfoundland (75%) (Table 8).

Two-thirds of Canadians disagree that: "Smoking helps you stay slim". Many more smokers (30%) than non-smokers (18%) believe that smoking helps you stay slim (Table 5). Surprisingly, this view is shared by slightly more men (23%) than women (20%). Canadians over 35 years of age believe that smoking helps one control one's appetite to a larger extent than do younger Canadians. For example, 28% of Canadians aged 55 to 64 agree with this statement while only one out of every six persons in the 15 to 24 age group do (Table 6). Agreement is strongest in the lower education category (Table 7).

FIGURE F: **PERCENTAGE OF POPULATION WHICH HAS ASKED OTHERS NOT TO SMOKE, AND PERCENTAGE WHICH HAS BEEN ASKED BY OTHERS NOT TO SMOKE, BY LOCATION, AGE 15+, CANADA, 1985**



There are small provincial differences: residents of British Columbia, Saskatchewan and Quebec are least likely to believe that smoking helps one to stay slim (Table 8).

Another test of knowlege in the form of an opinion question was "Do you think that a person who quits after ten years of heavy smoking reduces the risk of getting a disease related to smoking?" (Q. 32). Table 9 shows that nearly two-thirds of Canadians (62%) realize that quitting can reduce the risks of tobacco-related diseases either a great deal or moderately. More non-smokers (65%) than smokers (58%) think this is so (Table 10). There were no significant sex differences in response to this question. There is increasing agreement with age from the 15 to 24 category (60%) to the 35 to 44 age group (72%) with a decreasing trend for the older age group, down to a low of 49% in the 65 and older age group. It is worth noting that the number of Canadians who report not knowing if the health status of a smoker is improved by quitting increases with age from 4% for the 15 to 24 age group to 20% for the 65 and older category.

"Non-smokers should be provided with smoke-free work areas" is an opinion supported by 82% of Canadians. Smokers agree with this statement (78%) although to a lesser extent than non-smokers (84%). Women are more likely to agree with this statement than men (Tables 5 and 6).

Agreement with this sentiment varies with age. The younger age group (15 to 24) reports the strongest support (86%) and the 55-64 year-olds, the weakest (77%). Canadians who have not finished high school support this statement to a somewhat lesser extent than others (Table 7). There is only one marked provincial departure from the national average of 82%: Newfoundlanders show the strongest support at 91%.

When asked whether "smokers should ask permission before smoking in the presence of others", 81% of all Canadians agree; more non-smokers (85%) than smokers (72%) do so. So do more women (86%) than men (76%) (Tables 5 and 6).

There are no age differences in support of this statement, but agreement is stronger among those who have the highest level of education (Table 7). There is also a large provincial consensus among respondents although Quebec shows somewhat less support (Table 8).

One out of every three Canadians believes that "Most non-smokers do not mind if others smoke in their presence". More smokers (37%) than non-smokers (22%) hold this belief (Table 5). More men (29%) than women (26%) agree with this statement. Although there are some age differences in this belief, there is not a clear age pattern. Agreement is related to education – 30% in the lowest education category agree compared to 21% in the highest. Newfoundland shows stronger support of this belief (37%), than residents of Ontario, Quebec, British Columbia or New Brunswick (Table 8).

One in two Canadians disagrees with the statement that "people are too concerned about the effects on their health of other people smoking". Those who disagree tend to be non-smokers (56%) rather than smokers (38%) and male (45%) rather than female (43%) (Tables 5 and 6). Younger respondents agree to a larger extent than older ones with this statement (Table 6), as do those with elementary school education, compared to their better-educated compatriots (Table 7). For example, in the 15-24 age group, one out of two people agrees (48%) while this proportion is one out of every three in the 65 years and older category (36%). There are significant provincial differences. Quebec shows the strongest agreement (59%) and British Columbia (33%) the weakest.

Discussion

Trends in smoking

Smoking among Canadians has been thoroughly monitored since the 1960s. Of particular interest for comparisons with the HPS are the Canadian Labour Force Surveys (LFS)[2] and the Canada Health Survey (CHS).[3] The first is conducted by Statistics Canada and, since 1965, Health and Welfare Canada has monitored the smoking habits of Canadians through December supplements to this survey. The Canada Health Survey, which was conducted in 1978-79, measured, among other things, the smoking status of Canadians.

Samples were quite similar in the LFS, CHS and HPS; conceptual definitions and methods of reporting differed, however. In particular, about half of the LFS responses were based on proxy reports, which probably deflates the estimates of smoking, particularly among adolescents.[1] Such bias would increase the apparent declines reported here and elsewhere, since there are no proxy data in the more recent studies.

The proportion of smokers among the Canadian population 15 years and over has steadily decreased in the past 20 years. While one out of every two Canadian was a smoker in 1965 (50%), only one out of three (34%) is a smoker today. It is interesting to note that the percentage of smokers declined much more rapidly among men between 1965 and 1985 (-20%) than it did among women (-1%). The result of this differential trend is that the overall percentage of smokers among men and women is now almost equal while the difference in 1965 was 31%.

Over the past five years, we find that three provinces have seen their proportion of smokers drop more than the national average of 3%. They are: New Brunswick (-7%), Alberta (-4%) and Quebec (-3.7%). It appears that Manitoba and Saskatchewan are the only two jurisdictions where the proportion of smokers has remained stable or has increased somewhat over this period. It is not possible to be definitive about this, however, given the differences between the two surveys.

In comparing the CHS of 1979 and the current HPS, the most significant drop in the proportion of smokers is found among those who have not completed secondary education (-19%). The second largest drop is among those in the highest education category, those who have a post-secondary degree (-7%).

Policy Implications

It is encouraging for the organizations and individuals involved in tobacco control to find that the overall proportion of self-reported rates of smoking is continuing to decline, albeit less rapidly than in the previous fifteen years. While it is premature to say that the trend is slowing down, it may be that we are approaching a decline threshold – a level below which changes are more difficult to obtain. At this point, additional collaborative efforts that incorporate a clear, comprehensive approach are required.

The HPS results confirm that the proportion of smokers in the population has declined much more dramatically among men than among women in the last twenty years. While a greater proportion of men were smokers to begin with, the HPS data together with other recent studies suggest that, to date, traditional health education programs have failed to reach women effectively. Despite increased knowledge about smoking, the surveys show that almost 50% of women aged 20 to 29 are regular smokers. Additional efforts are needed to explore why more women are smoking and to discover effective cessation and prevention programs. Health policy must consider the social factors involved in female tobacco use such as advertising practices, wage and income disparities, societal pressures to be "thin" and the use of tobacco as a coping mechanism for dealing with stress associated with role change, poverty and single parenting.

Similarly, priority should be given to identifying and implementing new approaches designed and adapted to the needs of low-income groups. Although it is encouraging that the most significant decrease in the number of smokers is among the less educated, the highest percentage of smokers is still found among Canadians with low incomes.

Because of a host of factors, ranging from the addictive properties of tobacco to the social images associated with smoking, people continue to smoke even when they know the consequences and would like to stop. This points to the continuing importance of co-ordinated prevention efforts.

There is evidence in the section on "Beliefs about Smoking" that a large majority of Canadians are convinced that smoking is harmful and endorse the messages put forward by the anti-smoking movement. This could be an indication that there is now a very broad popular base for new control measures on smoking.

While two-thirds of Canadians do not smoke, only one-third have asked someone to refrain from smoking in their presence in the past year and only one-half of smokers report having been asked to refrain from smoking. Given the evidence on the impact of "second hand" smoking, priority should be given to programs that inform the public of the health hazards associated with involuntary exposure to tobacco smoke and encourage non-smokers to be more assertive about their desire for a smoke-free environment.

Of particular importance is the workplace where people may have no option but to endure a smoke-filled environment. While almost 90% of Canadians are exposed to smoking at least in some parts of the workplace and 82% feel that there should be some restrictions, only 41% of all workers have some area where smoking is prohibited and only 7% work in an environment where smoking is banned. It is unclear from the survey data whether designated non-smoking areas are at work stations, or in "leisure" areas such as cafeterias. If the former is true, workers are exposed to the smoke of others for the larger part of their working day.

Given the importance put on occupational health in recent years and the fact that work is not a discretionary activity, high priority should be given to programs and incentives to limit smoking in the workplace.

In conclusion, the persistent efforts of governmental and non-governmental agencies have had a positive effect on smoking. There is good indication that there is a very broad popular base of support for further increases in tobacco control measures at this time, although it is also likely that results will be harder to achieve. Yet, while progress toward a smoke-free environment is noticeable, much remains to be done. Co-ordinated efforts, a comprehensive approach, consistent policies and programs are called for.

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1. **Millar, W.J.** "Smoking prevalence among Canadian adolescents: A comparison of survey estimates." *Canadian Journal of Public Health*, 76 (1985): 33-37.

2. **Health and Welfare Canada**. *Smoking habits of Canadians, 1965 to 1979*. Ottawa: Health Promotion Directorate (Technical Report Series No. 9), December 1980.

3. **Health and Welfare Canada and Statistics Canada**. *The Health of Canadians: Report of the Canada Health Survey*. Ottawa: Minister of Supply and Services Canada (Catalogue No. 82-538), 1981.

TABLE 1: **SMOKING STATUS, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	SMOKERS (% of Total Population) Total	Regular	Occasional
Total 15+	19,611	33.8	30.1	3.7
Men	9,623	35.6	31.6	4.0
Women	9,989	32.1	28.6	3.4
AGE				
15-24	4,333	35.2	30.1	5.1
M	2,203	34.7	29.7	5.0
W	2,130	35.8	30.6	5.2
25-34	4,476	39.8	35.6	4.2
M	2,225	42.3	37.3	5.0
W	2,250	37.3	33.9	3.4*
35-44	3,529	36.2	32.5	3.7
M	1,769	37.3	33.5	3.8*
W	1,760	35.0	31.5	3.6*
45-54	2,520	35.7	33.4	2.2*
M	1,263	38.3	36.5	1.8*
W	1,257	33.1	30.3	2.6*
55-64	2,306	29.9	26.2	3.7*
M	1,108	33.2	28 4	4.8*
W	1,199	26.8	24.0	2.8*
65+	2,446	18.7	16.9	1.8*
M	1,054	19.7	17.9	1.8*
W	1,392	18.0	16.1	1.8*

* high sampling variability

TABLE 2: **SMOKING STATUS, BY EDUCATION AND INCOME, AGE 15+, CANADA, 1985**

	Population (000's)	SMOKERS (% of Total Population) Total	Regular	Occasional
EDUCATION				
Secondary or less	12,636	37.2	33.0	4.2
Some Post-secondary	2,487	35.4	34.0	1.3*
Post-secondary degree	4,368	23.6	19.9	3.6
INCOME QUINTILE				
Total 15+	19,611	33.8	30.1	3.7
Lowest	2,826	35.9	32.3	3.6
Second	2,437	36.3	33.4	3.0
Third	2,614	36.7	33.1	3.5
Fourth	2,179	33.4	29.3	4.0
Highest	2,513	36.0	32.7	3.3

* high sampling variability

TABLE 3: **SMOKING STATUS, BY PROVINCE, AGE 15+, CANADA, 1985**

	Population (000's)	SMOKERS (% of Total Population) Total	Regular	Occasional
ALL PROVINCES	19,611	33.8	30.1	3.7
Men	9,623	35.6	31.6	4.0
Women	9,989	32.1	28.6	3.4
Newfoundland	423	39.9	33.3	6.6
P.E.I.	96	33.3	29.4	3.8*
Nova Scotia	681	35.0	32.3	2.6*
New Brunswick	544	31.4	28.1	3.2*
Quebec	5,148	39.0	35.3	3.7
Ontario	7,096	31.7	28.0	3.7
Manitoba	818	34.6	29.7	4.9*
Saskatchewan	759	29.5	27.6	1.9*
Alberta	1,762	33.1	28.3	4.7
B.C.	2,267	29.6	26.5	3.0*
Yukon	17	40.4	34.7	5.3

* high sampling variability

TABLE 4: **"IS SMOKING RESTRICTED IN YOUR PLACE OF WORK?", AGE 15+, CANADA, 1985**

	Total	Smokers	Non-Smokers
Population 15+ (000's)	19,611	6,630	12,981
Responses:			
% Completely	3.7	3.0	4.1
% Certain places	21.6	22.9	20.9
% Not at all	26.6	30.1	24.7
% NA/DNK/Not Stated	48.1	44.0	50.3

TABLE 5: **OPINIONS ON SMOKING, BY SMOKING STATUS, AGE 15+, CANADA, 1985**

	Total	Smokers	Non-Smokers
Population 15+ (000's)	19,611	6,630	12,981
Responses:			
"Children are more likely to smoke if their parents smoke."			
% Agree	70.1	62.6	74.1
% Disagree	25.8	34.0	21.7
% No op./Not stated	4.1	3.4	4.1
"People are too concerned about the health effects of second-hand smoke."			
% Agree	44.4	54.6	38.8
% Disagree	49.4	37.8	55.5
% No op./Not stated	6.6	7.6	5.8
"Most non-smokers don't mind if others smoke in their presence."			
% Agree	27.3	37.2	22.4
% Disagree	66.8	55.8	72.6
% No op./Not stated	5.9	7.0	5.1
"Women should not smoke during pregnancy."			
% Agree	90.7	87.0	92.8
% Disagree	3.5	6.4	2.0
% No op./Not stated	5.8	6.7	4.2
"Non-smokers should be provided with smoke-free work areas."			
% Agree	82.0	78.4	84.0
% Disagree	12.7	15.7	11.2
% No op./Not stated	5.4	5.9	4.8
"Smokers should ask permission before smoking in the presence of others."			
% Agree	80.8	72.4	85.4
% Disagree	14.6	21.9	10.9
% No op./Not stated	4.6	5.7	3.8
"Smoking helps you stay slim."			
% Agree	21.5	29.5	17.5
% Disagree	65.8	62.1	67.9
% No op./Not stated	12.7	8.4	14.6

TABLE 6: **OPINIONS ON SMOKING, BY AGE AND SEX, AGE 15+, CANADA, 1985**

AGE	"Children are more likely to smoke if their parents smoke."	"People are too concerned with effects of second hand smoke."	"Most non-smokers don't mind if others smoke in their presence".	"Women should not smoke during pregnancy".	"Non-smokers should be provided with smoke-free work areas.	"Smokers should ask permission before smoking in the presence of others."	"Smoking helps you stay slim."
	% Agree	% Agree	% Agree	% Agree	% Agree	% Agree	% Agree
All ages 15+	70.1	44.1	27.3	90.7	82.0	80.8	21.5
Men	72.8	45.0	29.2	89.3	79.6	75.9	23.3
Women	67.5	43.1	25.6	92.0	84.2	85.5	19.8
15-24	75.2	48.3	27.2	94.0	86.4	80.5	15.9
M	78.5	50.9	29.1	93.0	84.5	74.6	17.3
W	71.8	45.6	25.1	95.0	88.4	86.6	14.4
25-34	73.8	43.6	26.8	92.3	82.0	77.2	16.4
M	77.3	46.8	29.4	91.7	79.0	71.2	16.5
W	70.3	40.5	24.3	93.0	85.0	83.1	16.3
35-44	70.6	46.8	24.9	91.2	82.4	81.1	24.8
M	74.8	46.4	26.3	89.9	77.7	76.8	25.9
W	66.4	47.1	23.5	92.5	87.1	85.5	23.7
45-54	64.9	41.9	29.0	89.1	79.9	82.8	28.1
M	64.0	40.3	32.1	84.2	79.0	78.7	34.1
W	65.8	43.5	25.9	94.1	80.8	87.0	22.1
55-64	65.6	44.3	30.0	88.5	76.7	82.4	27.7
M	68.8	44.5	31.7	89.4	75.2	78.2	29.5
W	62.7	44.2	28.4	87.7	78.0	86.2	26.0
65+	63.3	35.5	27.9	84.8	80.5	84.1	23.6
M	62.7	32.8	27.6	81.7	79.5	81.4	26.7
W	63.8	37.5	28.2	87.2	81.4	86.1	21.2

TABLE 7: **OPINIONS ON SMOKING, BY EDUCATION, AGE 15+, CANADA, 1985**

EDUCATION	Population 15+ (000's)	"Children are more likely to smoke if their parents smoke."	"People are too concerned with effects of second hand smoke."	"Most non-smokers don't mind if others smoke in their presence".	"Women should not smoke during pregnancy".	"Non-smokers should be provided with smoke-free work areas.	"Smokers should ask permission before smoking in the presence of others."	"Smoking helps you stay slim."
		% Agree	% Agree	% Agree	% Agree	% Agree	% Agree	% Agree
Secondary or Less	12,630	67.4	48.7	29.8	89.2	79.8	78.8	23.1
Some post-secondary	2,484	73.2	37.1	26.7	91.8	86.4	82.2	19.0
Post-secondary degree	4,368	76.3	34.7	20.7	94.7	85.7	86.0	18.1

TABLE 8: **OPINIONS ON SMOKING, BY PROVINCE, AGE 15+, 1985**

PROVINCE	Population 15+ (000's)	"Children are more likely to smoke if their parents smoke."	"People are too concerned with effects of second hand smoke."	"Most non-smokers don't mind if others smoke in their presence".	"Women should not smoke during pregnancy".	"Non-smokers should be provided with smoke-free work areas.	"Smokers should ask permission before smoking in the presence of others."	"Smoking helps you stay slim."
		% Agree	% Agree	% Agree	% Agree	% Agree	% Agree	% Agree
Newfoundland	423	74.7	43.9	36.8	94.3	90.6	86.8	26.2
P.E.I.	96	72.9	32.4	26.5	90.6	84.8	80.5	19.0
Nova Scotia	681	73.2	34.6	28.3	88.7	84.7	80.8	20.4
New Brunswick	544	74.1	37.9	26.4	92.1	83.6	81.1	23.8
Quebec	5,148	64.8	59.2	26.2	91.2	79.8	74.0	18.9
Ontario	7,096	73.0	40.1	26.1	90.2	80.7	80.8	24.3
Manitoba	818	68.3	42.3	35.6	90.5	82.9	85.3	21.7
Saskatchewan	759	70.7	40.9	32.2	92.3	82.9	85.1	18.5
Alberta	1,762	69.4	41.5	29.0	90.6	83.8	85.7	22.0
B.C.	2,267	71.2	30.6	26.2	90.1	85.3	86.3	18.2
Yukon	17	70.6	38.0	32.3	89.9	80.6	82.3	20.1

TABLE 9: "DO YOU THINK THAT A PERSON WHO QUITS AFTER TEN YEARS OF SMOKING REDUCES THE RISK OF GETTING A DISEASE RELATED TO SMOKING?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	Can reduce great deal (%)	Can reduce a moderate amount (%)	Can reduce a little bit (%)	not at all (%)	do not know (%)
All ages 15+	19,611	32.1	30.3	16.8	11.4	9.1
Men	9,623	33.9	29.2	16.3	12.2	8.4
Women	9,989	30.5	31.5	17.2	10.6	9.9
AGE						
15-24	4,333	26.5	33.7	22.1	13.2	4.4
M	2,203	31.9	28.6	21.9	13.4	4.2
W	2,130	20.9	39.1	22.3	13.0	4.6
25-34	4,476	30.9	34.2	17.5	10.2	6.8
M	2,225	31.5	33.9	16.0	10.5	8.0
W	2,250	30.4	34.5	18.9	9.4	5.7
35-44	3,529	43.0	28.9	12.1	8.9	7.1
M	1,769	45.4	28.1	11.5	8.5	6.6
W	1,760	40.5	29.7	12.7	9.4	7.7
45-54	2,520	34.1	28.7	16.5	9.7	10.7
M	1,263	32.4	26.8	17.4	11.6	11.8
W	1,257	35.8	30.6	15.7	7.8	9.6
55-64	2,306	35.9	25.2	14.0	12.3	12.2
M	1,108	35.9	26.5	13.3	12.9	11.2
W	1,199	35.9	24.0	14.6	11.6	13.1
65+	2,446	23.2	25.8	15.7	15.2	20.1
M	1,054	23.2	28.0	15.4	19.7	13.7
W	1,392	23.2	24.1	15.9	11.8	24.9

TABLE 10: "DO YOU THINK THAT A PERSON WHO QUITS AFTER TEN YEARS OF SMOKING REDUCES THE RISK OF GETTING A DISEASE RELATED TO SMOKING?", BY SMOKING STATUS, AGE 15+, CANADA, 1985

	Total	Smokers	Non-Smokers
Population 15+ (000's)	19,611	6,630	12,981
Responses:			
Reduces risk of disease			
% A great deal	32.1	30.7	33.0
% Moderately	30.3	27.2	32.0
% A little bit	16.8	17.4	16.5
% Not at all	11.4	16.7	8.7
% Do not know/ Not stated	9.4	8.1	9.8

4

Alcohol Use

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Highlights

- Most Canadians are moderate in their use of alcohol. Approximately one-fifth of the population does not drink. Among those who use alcohol, the average number of drinks consumed per week is five.
- In general, there are more drinkers in the western part of the country than in the east. Among those who use alcohol, those who live in the west drink more than those in the east.
- A large majority (87%) of alcohol users drink two to three times a week or less.
- More men drink alcohol and men drink more than women. However, within the youngest age groups (15-19 and 20-24 years), the difference between the sexes in the proportion of drinkers is negligible.
- For drinkers of both sexes, the lowest volume of alcohol consumption occurs within the youngest and oldest age groups.
- Single, separated and divorced men have the highest representation in the heavier drinking categories.
- The population in the paid labour force has a higher proportion of people who drink than does the population not working for pay. As a group, men looking for work have the highest proportion, consuming 15 drinks or more per week.
- Among women, blue collar workers are most frequently represented in the "15 drinks or more" category.
- For both men and women, income is related to increased alcohol consumption, in terms of both the proportion of drinkers and the amount of alcohol consumed.
- Those with no regular social contacts tend to be non-drinkers or to report no drinking during the week preceding the survey.
- Over half of the population claims to have friends who drink too much. The more alcohol consumed, the more likely one is to report having friends who drink excessively.
- Although Canadians view alcohol as a problem that requires government attention, very few consider alcohol to be their own problem or feel they need more information about alcohol.
- The results suggest a fairly high tolerance for drunkenness, with 40% agreeing with a statement that "most people do not mind if you get intoxicated once in a while".
- Less than 1% of Canadians reduced their drinking in the year preceding the survey or had intentions to cut back during the year following the survey.
- The results of this survey are similar to those of the Canada Health Survey of 1978/79. This similarity provides confidence in the present data.

Introduction

Drinking has long been recognized as a practice which could have a bearing on health as well as on the social and economic well-being of people. For this reason, a number of items in the Health Promotion Survey concern behaviour, attitudes and beliefs regarding the use of alcoholic beverages. Calculations of alcohol intake are based upon responses to interview items requesting the number of alcoholic drinks the respondents consumed during each of the seven days preceding the interview (Questions 36-40; see Appendix B). The responses to these items are described below. Some of the response patterns are analysed in terms of the demographic characteristics of the respondents. Additional analysis includes the association of drinking behaviour to health assessment and social activity and also a description of beliefs about alcohol and its use among Canadians. The issue of drinking and driving is dealt with in Chapter 8, "Safety on the Road".

Throughout this analysis, the term "current drinkers" designates those who report having used alcoholic beverages in the year preceding the survey. This designation differs from the one in *The Health of Canadians*,[1] where "current drinkers" applied to those who drank at least once a month.

Of major concern in any survey of drinking practices is the reliability of the report. This survey adopted standard questions wherever possible, and provided assurances of confidentiality, which are thought to be more convincing in a telephone survey than in a face-to-face survey. Nevertheless, there may be some under-estimate of unknown quantity in this survey, as in others, regarding frequency and amount of alcohol consumption. This should not impair inter-group comparisons. Some reassurance may be taken from the very low level of non-response; it was less than 1% for these questions and is not shown in the tables.

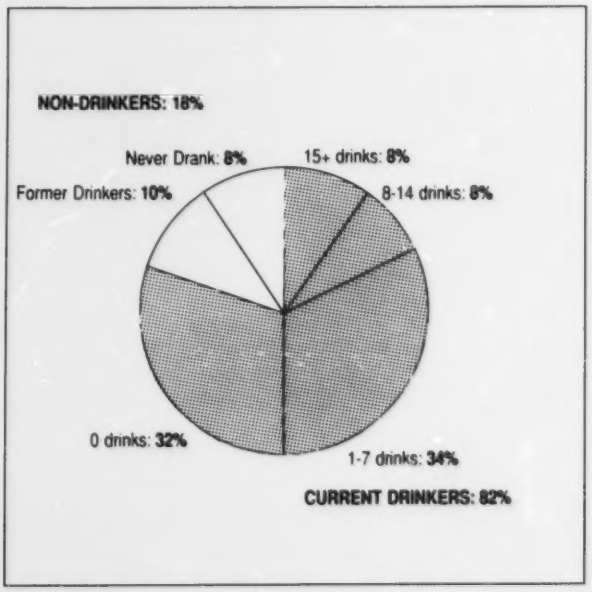
Because alcohol use is related to age and sex, the fact that the provincial and territorial populations are not standardized may affect some of the comparisons of alcohol use for these groups. However, as explained in Appendix A, this effect is likely to be very small. Non-standardized data will affect other comparisons — e.g., between widows and single persons — and should be borne in mind when reviewing the findings.

Prevalence of drinking

Eighty-two percent of Canadians 15 years of age and over used alcohol during the year prior to the survey; 8% have never had alcohol and 10% are former drinkers (Figure A).

Of those who use alcohol, results of this survey suggest that the large majority do so in moderation. Nearly one-third of the current drinkers had not had a drink during the week prior to the survey and an additional 41% had fewer than 15 drinks during the seven-day period. About 8% of the population had 15 drinks or more during the reference week (Table 1). Among current drinkers, the average number of drinks consumed during the survey week was five: seven for men, and three for women (Table 2).

FIGURE A: **AMOUNT DRUNK IN WEEK PRECEDING THE SURVEY, BY TYPE OF DRIVER, AGE 15+, CANADA, 1985**



As far as frequency of alcohol use goes, 87% of those who use alcohol report using it three times a week or less. (Figure A)

Population patterns

In general, the percentage of alcohol users by province increases from east to west, with Prince Edward Island having the lowest proportion of current drinkers and Yukon Territory the highest (Table 1). Ontario represents an exception to the east-to-west increase in drinking rates; it has the second highest proportion of current drinkers and the third highest proportion of people who had 15 drinks or more during the week prior to the survey. The volume of alcohol used in that week by current drinkers also suggests that alcohol users in the west drink more than users in the east.

Estimates of the average number of drinks per week among current drinkers show that the Atlantic provinces and Quebec have per capita consumption levels below the national average; with the exceptions of Saskatchewan and Alberta, the rates of consumption of the other provinces are above the national average (Table 2).

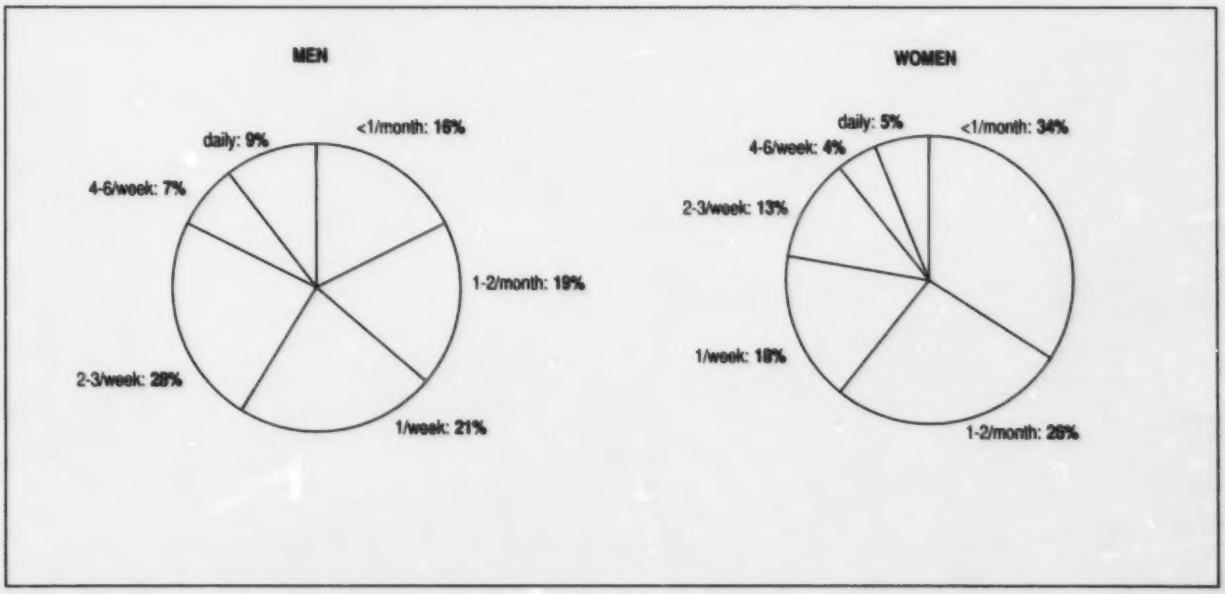
Sex and age

Regardless of age, more men drink and men drink more frequently and in greater quantity than women (Table 3 and Figure B). In Canada, 86% of males 15 and over are current alcohol users, compared to 77% of females. This 9% difference between the sexes for the population as a whole, however, does not reflect the variation in the differences between the sexes in different age categories. In general, differences in the proportions of alcohol users by sex increase with age, with negligible differences between the sexes in the proportion of alcohol users in the youngest age groupings and substantial differences in the higher age categories. Among those aged 15-19 and 20-24 years, the excess of male over female drinkers is only 1% and 2% respectively, whereas in the age categories of 55-64 and over 65 years, the differences are 8% and 31%. A notable exception to the increase in the differences between men and women in the proportion of current drinkers with age is in the 25-34 age category, with nearly 10% more men than women currently using alcohol. Among current drinkers in all age groups women outnumber men in the lighter drinking categories, having had seven drinks or fewer during the week prior to the survey. Conversely, the proportion of men in the heavy volume categories (22 drinks or more during the week) far exceeds the proportion of women.

For both sexes, there is an inverse relationship between age and the proportion of current drinkers. With the exception of an increase of 11% (from 81% to 92%) between the 15-19 and 20-24 age categories, the proportion of current drinkers decreases steadily with the increase in age. (Figures B and C)

Among current drinkers, the lowest average number of drinks during the week was consumed by the youngest and oldest age groups (Figure C). It is clear that the volume of alcohol consumed by all age groups is far greater among men than it is among women.

FIGURE B: **CURRENT DRINKERS, FREQUENCY OF DRINKING, BY SEX, AGE 15+, CANADA, 1985**



Marital status and household size

Single (never-married) people represent the highest proportion of current users of alcohol, and widows and widowers, the lowest. Single, separated and divorced men have the highest representation in the heaviest drinking categories. This is especially true of separated and divorced men, 10% of whom consumed 28 drinks or more during the week prior to the survey (Table 4).

One-person households have far fewer current drinkers than do those with two or more people. This is accounted for by the fact that women living alone yield the lowest proportion of current drinkers of any household sex category. Men in one– and three-person households contribute substantially to the current drinker categories and are disproportionately represented in the heavy volume categories (data not shown).

Education and income

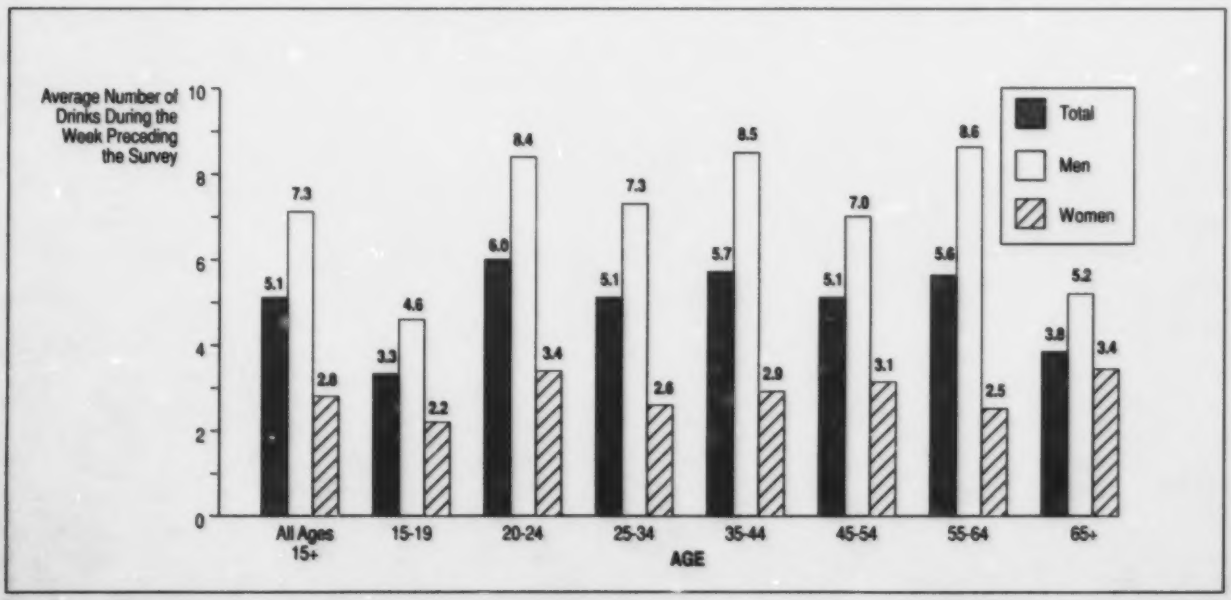
The population with secondary education or less has the lowest proportion of current drinkers and also the largest differences between the sexes in terms of proportions of current drinkers. The sex differences between those having completed high school are the smallest. This middle category also has the highest representation of both sexes in the heavier-drinking categories (Table 5).

There is a direct relationship between income and proportion of current drinkers. In general, the higher the income quintile, the higher the proportion of alcohol users. The highest, or fifth quintile, however, has slightly fewer current drinkers than does the fourth quintile. With respect to sex, differences in the proportions of male and female drinkers decrease with the increase in income levels, with an 11% difference between the sexes in the first quintile and less than 1% difference in the fifth (Table 6). Among those who had consumed 15 drinks or more during the week prior to the survey, the lower two quintiles had substantially smaller proportions than did the upper three. For both men and women, income seems to be related to alcohol consumption.

Economic activity

Overall, the sector of the population that is retired has by far the lowest proportion of current drinkers. With the exception of those whose main activity is keeping house (mainly women), there is little difference among other categories in terms of proportions of current drinkers or heavier drinkers (Table 7).

FIGURE C: **AVERAGE NUMBER OF DRINKS IN THE PAST WEEK, BY CURRENT DRINKERS, BY AGE AND SEX, AGE 15+, CANADA, 1985**



People in the paid labour force have a higher proportion in the current drinker category than do people who are not working for pay. Among employed people there are negligible differences between employment categories in terms of proportions of current drinkers. Those classified as managerial and professional have the largest proportion of current drinkers and within this category of workers, male and female proportions of current drinkers are nearly identical (Table 8). Men looking for work (Table 7) had the highest proportion of those having had 15 drinks or more during the previous week. Among women, however, blue collar workers had the highest proportions (8%) in the 8 drinks or more categories (Table 8).

Social relationships

Aside from relationships presented in "Population patterns" (above), other aspects of social life showed some association with the use of alcohol.

Number of friends

Canadians were asked to identify the number of people, including relatives, whom they saw socially on a regular basis (Q. 66). Table 9 shows that social isolates (those reporting no regular social contacts) are more likely than any other social category to be either life-long abstainers or former drinkers. Moreover, aside from non-drinkers, half of those who report having no regular social relationships also report having had no drinks during the week prior to the survey.

Aside from this tendency, there is no apparent relationship between the number of contacts and volume of alcohol consumed.

Friends who drink too much

Canadians were also asked to state how many of their friends drank too much (Q. 68). The categories were "none", "a few", "about half" and "almost all". The data suggest that the majority of Canadians (53%) have first-hand knowledge of excessive drinking. Only among non-drinkers and former drinkers did the majority report not having any friends who drink too much.

Table 10 shows a fairly strong association between the type of drinkers and the reports of the number of friends who drink excessively. The more alcohol consumed in the week prior to the survey, the more likely it was that a few or more friends were thought to drink too much.

Attitudes, beliefs and intentions

Alcohol is recognized as a problem in Canada. On a scale of 1 to 10, with 1 being "not at all important" and 10 being "extremely important", 70% of Canadians assessed the importance of government involvement in alcohol and health (Q. 79) at 8, 9 or 10. (Table 6 in Chapter 15 provides more detail on this rating.)

As mentioned above, most Canadians have direct exposure to alcohol problems. Over half of Canadians claim that at least "a few" of their friends drink too much. However, only a very small proportion of them see alcohol as their own problem: 4% claim their spouse drinks too much and fewer than 1% believe reducing alcohol consumption would be the most important thing they could do to improve their own physical health. Moreover, only 4% of adult Canadians state that they personally need more information about alcohol (Table 4, Chapter 15).

Beliefs regarding alcohol-related issues suggest that there is considerable confusion and ambivalence about alcohol in Canada (Table A):

TABLE A: **ATTITUDES AND BELIEFS ABOUT DRINKING, AGE 15+, CANADA, 1985**

	% Agree	% Disagree	% No Opinion
"Moderate drinking can be good for your health."	43	50	7
"On social occasions, I often feel obligated to have a drink, even when I would rather not."	22	76	2
"Most drinkers do not suffer health problems as a result of their drinking."	20	68	12
"Most people don't mind if you get intoxicated once in a while."	40	52	7
"I'd rather pay for a taxi than see a friend drive after drinking."	95	2	2

Canadians are evenly split regarding the health benefits of drinking, yet most apparently think that drinkers are likely to suffer from health problems. (There may have been some confusion regarding the term "drinkers", which some people might have taken to mean those using alcohol excessively). Occasional intoxication seems to be tolerated by 40% of Canadians, but only 22% claim they feel social pressure to drink when they don't want to.

There is an overwhelming preference for paying for a taxi rather than seeing a friend drive after drinking.

A very small percentage (1%) indicate that they have reduced their drinking in the past year, intend to do so during the coming year, or feel they need to in order to cope better with stress or to improve their physical health (see Chapter 15, Tables 2, 3, 5).

Discussion

Trends in consumption

Data from the HPS on types of drinkers are compared to similar data collected during the 1978/79 Canada Health Survey[1] in Table B.

The data from the two surveys indicate similar rates of alcohol use for Canadians over a seven-year period. The small percentage changes suggest that more people have experienced alcohol use, but at the same time, more people have given up using alcohol, or have reduced their frequency of drinking. These findings should, however, be viewed with substantial caution because the small percentage differences may be affected by sampling variability. Moreover, the percentage of missing cases is larger in the earlier survey.

The similarity between the results of the two surveys provides considerable confidence in the reliability of both sets of data. Adding to this confidence is the fact that a large majority of Canadians who use alcohol report that their drinking patterns during the week before the survey represented their usual alcohol intake (Table B).

TABLE B: TYPES OF DRINKERS, AGE 15+, CANADA, 1978/79 AND 1985

	1978/1979	1985
TYPE OF DRINKER		
Never drank	12%	8%
Former drinker (used to drink alcohol, but has not had a drink in the last 12 months)	4%	10%
Occasional drinker (drinks alcohol less than once a month, but has had alcoholic beverages within the last 12 months)	15%	20%
Drinker (designated "current drinker" in the *Health of Canadians*; has alcoholic beverages at least once a month)	65%	61%
Type of drinker unknown	4%	less than 1%

Interpretation

In one sense, the HPS results should be regarded as preliminary because the data on drinking are presented in the form of two-way cross-tabulations for the purposes of clarity of communication and to introduce the data to those wishing to do further research. For example, there are very strong associations between drinking and age and sex. While it was not possible to introduce these factors as controls throughout this analysis, it is reasonable to expect that they would modify other relationships in important ways: older people and especially older women have lower incomes; thus, the association of income with drinking should be reduced with an introduction of age/sex controls.

Interestingly, current drinkers, including those who report drinking quite heavily, describe themselves as wealthier and more sociable than non-drinkers. The use of alcohol is a well-established social custom and regular, moderate use may be indicative of active participation in social life for the majority of the population. If this is true, abstinence may indicate the opposite. Prior epidemiological research has established the existence of a U-shaped curve of the relationship between morbidity/mortality and alcohol use: non-drinkers and heavy drinkers have higher rates of health impairment and death than do moderate users of alcohol.[2,3,4] Although male heavier drinkers tend to be over-represented among the unemployed, divorced and separated, for several possible reasons there is little indication here of health or other social difficulties associated with high-volume drinking. First, the survey was not designed to assess specific problems with alcohol. Identifying problem drinkers from general population survey data usually necessitates questions in addition to those concerning quantity and frequency of alcohol use. Secondly, this survey assessed behaviour and attitudes at one point in time. Excessive drinking takes time to affect physical, mental and social well-being. It is quite possible, then, that a substantial proportion of the present heavy drinkers will develop physical disabilities and social difficulties in the future. Moreover, it is possible that many of the former drinkers have had prior troubles involving alcohol.

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2. **Glynn, R.J., et al.** "Changes in Alcohol Consumption Behaviors among Men in the Normative Aging Study." In *Nature and Extent of Alcohol Problems among the Elderly*. Edited by G. Maddox, L.N. Robbins and N. Rosenberg. New York: Springer Publishing Company, 1986, p. 101-116.

3. **Kratsky, A.L., et al.** "Alcohol and Mortality: A Ten-Year Kaiser- Permanente Experience." *Annals of Internal Medicine*, 143 (1983): 1366-1374.

4. **Marmot, M.G., et al.** "Alcohol and Mortality: A U-Shaped Curve." *Lancet*, 1 (1981): 580-583.

TABLE 1: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY PROVINCE, AGE 15+, CANADA, 1985

	Total Population (000's)	Non-Drinkers		Total Current Drinkers	Drinks 0	Drinks 1-7	Drinks 8-14	Drinks 15-21	Drinks 22-28	Drinks 28+
		Never Drank	Former Drinker							
Canada	%	7.7	10.4	81.4	31.5	33.5	7.9	4.4*	1.6*	2.4*
	19,611	1,512	2,040	15,962	6,175	6,574	1,557	857	320	479
Newfoundland	%	10.3	13.9	74.8	31.5	29.0	–	–	–	–
	423	43	59	316	133	123	–	–	–	–
P.E.I.	%	17.5	13.9	68.3	31.6	27.8	–	–	–	–
	96	17	13	66	30	27	–	–	–	–
Nova Scotia	%	13.0	12.6	73.5	29.7	27.3	–	–	–	–
	681	89	86	501	202	186	–	–	–	–
New Brunswick	%	12.4	16.4	69.8	34.4	24.2	–	–	–	–
	544	67	89	380	187	132	–	–	–	–
Quebec	%	11.5	11.1	77.0	31.2	33.7	–	–	–	–
	5,148	594	570	3,963	1,603	1,733	–	–	–	–
Ontario	%	5.6	8.8	85.2	35.2	31.8	–	–	–	–
	7,096	401	622	6,044	2,495	2,255	–	–	–	–
Manitoba	%	5.0	12.2	82.4	28.8	36.0	–	–	–	–
	818	41	100	675	236	295	–	–	–	–
Saskatchewan	%	6.5	9.9	83.4	33.0	32.4	–	–	–	–
	759	49	76	633	250	246	–	–	–	–
Alberta	%	6.7	9.6	83.0	28.7	37.3	9.3*	–	–	–
	1,762	118	169	1,463	506	658	163	–	–	–
B.C.	%	4.1	11.2	84.2	23.2	40.3	–	–	–	–
	2,267	93	254	1,908	526	914	–	–	–	–
Yukon	%	–	9.5	87.3	27.9	37.4	12.7	5.7	3.0*	–
	17	–	2	15	5	6	2	1	1	–

* high sampling variability
– not releasable

TABLE 2: AVERAGE NUMBER OF DRINKS CONSUMED BY CURRENT DRINKERS, AND SEX DIFFERENCES IN CONSUMPTION, BY PROVINCE, AGE 15+, CANADA, 1985

		Average Number of Drinks Per Week	Difference Between Men and Women (Average Drinks Per Week)
Canada		5.10	4.53
	Men	7.29	
	Women	2.76	
Newfoundland		4.63	4.60
	M	6.77	
	W	2.17	
P.E.I.		3.38	2.87
	M	4.72	
	W	1.85	
Nova Scotia		5.05	3.57
	M	6.68	
	W	3.11	
New Brunswick		3.94	4.60
	M	6.09	
	W	1.49	
Quebec		4.61	4.62
	M	6.84	
	W	2.22	
Ontario		5.17	4.56
	M	7.42	
	W	2.86	
Manitoba		5.50	4.75
	M	7.82	
	W	3.06	
Saskatchewan		4.85	4.50
	M	6.98	
	W	2.48	
Alberta		5.01	3.90
	M	6.90	
	W	3.00	
B.C.		6.25	5.02
	M	8.64	
	W	3.62	
Yukon		6.08	3.35
	M	7.67	
	W	4.32	

TABLE 3: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985

AGE		Non-Drinkers		Total Current Drinkers	Drinks 0	Drinks 1-7	Drinks 8-14	Drinks 15-21	Drinks 22-28	Drinks 28+	Weekly Average # Drinks
		Never Drank	Former Drinker								
Total Age 15+	19,611	7.7%	10.4%	81.4%	31.5%	33.5%	7.9%	4.3%	1.6%	2.4%	5.1
Men	9,623	463	900	8,236	2,497	3,280	1,088	664	270	437	
		4.8%	9.4%	85.6%	26.0%	34.1%	11.3%	6.9%	2.8%	4.5%	7.3
Women	9,982	1,049	1,140	7,726	3,677	3,293	469	–	–	–	–
		10.5%	11.4%	77.4%	36.8%	33.0%	4.6%	–	–	–	2.8
15-19	1,957	9.4	9.3	81.2	40.8	30.8	2.9*	3.1*	1.9*	1.4*	3.3*
M	1,001	7.5	10.5	81.8	38.9	29.0	14.1	3.7*	3.5*	2.7*	4.6*
W	956	11.4	8.0*	80.6	42.9	33.0	–	2.6*	–	–	–
20-24	2,376	2.9*	5.1	91.8	33.8	36.7	9.1	5.5	1.8*	4.9	6.0
M	1,202	2.5*	4.5*	93.0	30.3	30.7	12.9	8.3	2.5*	8.2	8.4
W	1,174	3.3*	5.8*	90.6	37.4	42.8	5.3*	2.5*	–	–	3.4
25-34	4,476	3.7	6.6	88.8	33.5	36.8	9.9	4.2	2.1	2.3	5.1
M	2,225	2.2*	4.2	93.6	24.8	39.4	15.3	7.1	2.9*	4.1	7.3
W	2,250	5.2	9.0	84.0	42.1	34.3	4.5	1.4*	1.2*	–	2.6*
35-44	3,529	5.9	6.9	87.0	26.4	41.9	8.4	4.5	2.3*	3.5	5.7
M	1,769	3.4*	7.3	89.0	21.0	38.1	11.4	7.2	4.4*	6.9	8.5
W	1,760	8.3	6.4	85.1	31.9	45.7	5.5	1.8*	–	–	2.9
45-54	2,520	8.2	11.3	80.3	29.7	31.3	11.8	5.3	1.1*	1.2*	5.1
M	1,263	5.0*	12.0	82.9	18.9	37.3	14.1	8.8	2.0*	1.7*	7.0
W	1,257	11.5	10.5	77.7	40.5	25.2	9.5	1.8*	–	–	3.1*
55-64	2,300	10.7	17.4	71.1	30.3	25.0	–	4.5	1.0*	2.5*	5.6
M	1,108	7.0*	17.4	75.4	22.1	29.3	11.1	5.8*	2.1*	5.0*	8.6
W	1,199	14.0	17.4	67.1	37.8	22.9	3.0*	3.2*	–	–	2.5*
65+	2,446	17.7	21.0	60.6	28.3	24.0	3.5	3.5	–	0.9*	3.8
M	1,094	10.2	16.0	72.3	31.8	26.1	4.6*	6.4*	–	2.0*	5.2*
W	1,392	23.4	24.3	51.8	25.6	22.3	2.6*	–	–	–	3.4*

* high sampling variability
– not releasable

TABLE 4: **TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY MARITAL STATUS AND SEX, AGE 15+, CANADA, 1985**

MARITAL STATUS		Non-Drinkers % Never Drank	Non-Drinkers % Former Drinker	% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
Married/Common Law										
Total	12,074	7.4	10.5	81.5	30.8	34.9	8.2	4.1	1.5	2.0
Men	5,984	4.8	10.2	84.8	24.7	35.8	11.6	6.7	2.5	3.6
Women	6,089	10.0	10.8	78.2	36.8	34.0	4.9	1.7	0.4*	0.4*
Single										
T	5,327	7.0	6.6	86.3	33.2	34.5	8.3	4.7	2.2	3.6
M	2,972	5.0	6.4	88.3	33.1	31.8	11.1	6.3	3.2	5.9
W	2,354	9.4	6.8	83.7	37.1	37.9	4.6	2.6*	0.9*	–
Widow/Widower										
T	1,189	17.9	24.3	57.2	33.1	17.9	2.0*	3.3*	–	–
M	247	8.2*	24.2	67.5	26.5	21.8	–	8.0*	–	–
W	943	20.4	24.3	54.5	34.3	16.9	–	–	–	–
Separated/Divorced										
T	1,017	2.9*	13.0	83.3	29.1	30.9	10.0	6.9*	–	4.4*
M	418	–	9.7*	87.9	13.5	34.3	12.2	13.8	–	10.1*
W	499	–	15.3	80.2	39.9	28.6	8.5*	–	–	–

* high sampling variability
– not releasable

TABLE 5: **TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY EDUCATION AND SEX, AGE 15+, CANADA, 1985**

EDUCATION		Non-Drinkers % Never Drank	Non-Drinkers % Former Drinker	% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
Total	17,201	7.7	10.4	81.4	31.5	33.5	7.9	4.4	1.6	2.4
Secondary or Less										
Total	11,257	9.3	12.7	77.2	31.0	29.9	8.0	4.4	1.4	2.5
Men	5,275	5.3	11.9	82.4	23.8	32.0	12.0	7.2	2.4	4.9
Women	5,981	12.9	13.4	72.7	37.4	28.0	4.4	2.0	0.5*	–
Some Post-secondary										
T	1,902	3.7*	7.1	89.0	32.1	37.4	8.9	3.5*	2.9*	4.2*
M	994	2.3*	7.7*	90.0	27.0	35.7	10.7	5.0*	5.2*	6.4*
W	908	5.3*	6.4*	87.9	37.7	39.3	7.0*	–	–	–
Post-Secondary Degree/Diploma										
T	4,043	5.0	6.5	88.4	28.8	42.1	9.2	9.1	1.6*	1.6*
M	2,142	4.1	4.3	91.6	24.4	42.3	12.0	7.6	2.4*	2.8*
W	1,901	6.1	8.9	84.9	33.7	41.8	6.1	2.4*	–	–

* high sampling variability
– non releasable

TABLE 6: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY INCOME AND SEX, AGE 15+, CANADA, 1985

INCOME QUINTILE		Non-Drinkers		% Total	%	%	%	%	%	%
		% Never Drank	% Former Drinker	Current Drinkers	Drinks 0	Drinks 1-7	Drinks 8-14	Drinks 15-21	Drinks 22-28	Drinks 28+
Total	19,611	7.7	10.4	81.4	31.5	33.5	7.9	4.4	1.6	2.4
Lowest										
Total	3,826	9.4	18.0	72.2	32.6	26.9	6.9	3.5	0.8*	1.5*
Men	1,215	6.0*	19.2	78.5	27.9	31.5	9.0	5.8*	1.8*	2.5*
Women	2,611	11.9	20.1	67.5	36.2	23.5	5.4	1.8*	–	–
Second										
T	4,437	8.0	11.3	80.4	32.1	30.2	10.4	5.0	–	2.0
M	2,306	5.8	10.4	83.8	22.9	32.9	15.7	7.6	1.0*	3.7
W	2,132	10.6	12.3	76.5	42.8	27.1	4.3	2.1*	–	–
Third										
T	4,614	3.4	6.7	88.8	31.6	35.6	9.2	6.9	2.7	2.9
M	2,438	2.3*	5.5	92.1	25.4	35.8	12.4	10.4	3.6	4.5
W	2,176	4.9	8.2	84.8	39.1	35.3	5.4	2.6*	1.5*	–
Fourth										
T	3,179	2.8	4.7	92.3	33.6	36.9	8.2	7.0	3.0	3.6
M	2,283	1.4*	5.7	92.9	30.6	33.6	9.6	9.7	3.8	5.7
W	895	4.8*	3.4*	91.4	38.0	41.7	6.3*	3.0*	–	–
Highest										
T	3,513	2.7	7.6	89.5	27.5	39.1	11.3	5.0	2.3*	4.2
M	2,384	2.4*	7.5	89.8	20.9	36.0	15.1	6.5	4.1	7.3
W	1,129	3.1*	7.7	89.1	35.8	42.8	6.7	3.2*	–	–

* high sampling variability
– not releasable

TABLE 7: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY MAIN ACTIVITY OVER PRECEDING 12 MONTHS, AND BY SEX, AGE 15+, CANADA, 1985

MAIN ACTIVITY		Non-Drinkers		% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
		% Never Drank	% Former Drinker							
Total	19,611	7.1	10.4	81.4	31.5	33.5	7.9	4.4	1.6	2.4
Working										
Total	10,414	4.4	7.2	87.9	29.4	37.4	10.8	4.6	2.2	3.5
Men	6,402	3.1	7.1	89.6	24.7	37.4	13.1	6.2	3.0	5.3
Women	4,012	6.4	7.3	85.2	36.9	37.5	7.2	2.0*	0.8*	0.8*
Looking for Work										
T	976	5.8*	11.0	83.0	25.1	33.5	11.0	8.8	3.0*	–
M	616	6.2*	12.4	81.2	18.0	28.3	14.6	13.3	4.2*	–
W	360	–	8.5*	86.1	37.2	42.3	–	–	–	–
Student										
T	2,300	7.9	8.5	83.5	37.7	33.1	4.9	3.6*	1.7*	2.4*
M	1,175	6.1*	8.6	85.1	36.6	27.3	7.5	6.0*	3.0*	4.6*
W	1,125	9.7	8.5	81.8	38.9	39.0	2.3*	–	–	–
Retired										
T	2,172	14.8	22.2	62.2	26.5	24.4	3.3*	6.3	–	1.3*
M	1,216	11.7	19.5	68.4	25.1	26.6	4.3*	9.3	–	2.1*
W	955	18.7	25.7	54.4	28.3	21.5	–	2.5*	–	–
Keeping House										
T	3,425	13.7	12.8	73.0	38.6	28.3	3.5	2.0*	–	–
M	35	–	–	88.3	23.5	54.6	–	–	–	–
W	3,390	13.8	12.9	72.8	38.8	28.0	34.4	2.0*	–	–

* high sampling variability
– not releasable

TABLE 8: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY EMPLOYMENT CATEGORY AND SEX, AGE 15+, CANADA, 1985

EMPLOYMENT CATEGORY		Non-Drinkers % Never Drank	Non-Drinkers % Former Drinker	% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
Managerial/Professional										
Total	3,209	3.2	6.2	90.4	29.1	41.2	9.5	5.4	1.9*	3.2
Men	1,928	2.6*	5.9	91.2	24.5	39.3	10.8	8.4	2.8*	5.1
Women	1,281	4.2*	6.0	89.1	35.5	44.1	7.6	–	–	–
Other White Collar										
T	3,723	5.8	6.7	86.6	31.4	38.3	10.0	3.4	1.3*	2.2*
M	1,452	3.8*	4.7*	91.4	23.5	41.2	15.0	5.2*	2.3*	4.2*
W	2,271	7.0	8.0	83.5	36.4	36.4	6.9	2.2*	–	1.0*
Blue Collar										
T	3,367	4.0	8.8	86.8	27.2	32.8	13.1	5.2	3.5	5.1
M	2,936	3.5	9.2	87.6	24.8	34.4	13.7	5.4	3.5	5.7
W	432	10.1*	6.3*	82.0	43.8	21.9	8.6*	–	–	–
Looking for Work										
T	976	5.8*	11.0	83.0	25.1	33.5	11.0	8.8	3.0*	–
M	616	6.2*	12.4	81.2	18.0	28.3	14.6	13.3	4.2*	–
W	360	–	8.5*	86.1	37.2	42.3	–	–	–	–
Student/Retired/ Housekeeper/Other										
T	8,079	12.2	14.4	72.9	34.8	28.5	4.0	3.6	0.8*	1.2
M	2,566	8.8	14.3	76.6	30.5	27.5	6.2	7.2	1.9*	3.3
W	5,513	13.7	14.5	71.2	36.2	29.0	2.9	2.0	–	–

* high sampling variability
– not releasable

TABLE 9: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY NUMBER OF PEOPLE SEEN SOCIALLY ON A REGULAR BASIS, AGE 15+, CANADA, 1985

NUMBER OF PEOPLE SEEN SOCIALLY ON A REGULAR BASIS	Population (000's)	Non-Drinkers % Never Drank	Non-Drinkers % Former Drinker	% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
Total	19,611	7.1	10.4	81.4	31.5	33.5	7.9	4.4	1.6	2.4
0 Person	116	20.7	14.1	65.3	52.1	–	–	–	–	–
1-7 Persons	3,941	7.7	10.6	81.2	32.7	34.3	7.3	3.0	1.5*	2.4
8-10 Persons	3,787	8.5	12.1	79.1	29.4	34.1	7.9	4.7	1.4*	1.6*
11-20 Persons	6,323	7.3	9.2	82.8	32.3	34.0	8.1	4.4	1.8*	2.3
21-30 Persons	2,476	6.3	10.3	83.1	33.1	31.6	8.6	4.2	2.1*	3.4
31+ Persons	2,735	7.2	10.9	81.4	29.3	32.0	8.7	6.6	1.4*	3.4
Not Stated	234	20.4	–	73.3	22.5	47.4	–	–	–	–

* high sampling variability
– not releasable

TABLE 10: TYPE OF DRINKER AND NUMBER OF DRINKS CONSUMED IN THE WEEK PRECEDING THE SURVEY, BY NUMBER OF FRIENDS "WHO DRINK TOO MUCH", AGE 15+, CANADA, 1985

NUMBER OF FRIENDS WHO RESPONDENT FEELS "DRINK TOO MUCH"		Total %	Non-Drinkers % Never Drank	Non-Drinkers % Former Drinker	% Total Current Drinkers	% Drinks 0	% Drinks 1-7	% Drinks 8-14	% Drinks 15-21	% Drinks 22-28	% Drinks 28+
Total	(19,611)	100	7.1	10.4	81.4	31.5	33.5	7.9	4.4	1.6	2.4
None	(8,672)	44.2	58.4	55.5	41.3	46.6	43.2	30.7	29.8	22.6	15.4
A few	(8,544)	43.6	31.2	33.8	46.1	41.7	46.2	60.1	49.7	47.9	48.2
About half	(1,298)	6.6	2.6*	5.3*	7.2	6.8	6.2	6.5	11.4	11.6	18.4
Most or all	(517)	–	–	–	–	–	–	–	6.9*	17.6	15.7
Do not know/ not stated	(579)	–	6.9*	4.1*	–	–	–	–	–	4.8*	–

* high sampling variability
– not releasable

5

Drug Use

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Highlights

- The use of sleeping pills in Canada is most common among:
  - older Canadians;
  - women;
  - low-income Canadians;
  - Francophones;
  - residents of Quebec and British Columbia; and
  - the retired and those keeping house.
- The use of tranquillizers in Canada is most common among:
  - older Canadians;
  - women;
  - low- and high-income Canadians;
  - Francophones;
  - Quebecers; and
  - retired and those keeping house.
- The use of stimulants in Canada is most common among:
  - the 15-24 age group;
  - among men; and
  - students.
- The use of cannabis in Canada is most prevalent among:
  - the 15-24 age group;
  - men (except those in the 15-24 age group);
  - students, those looking for work and blue collar workers;
  - those who have completed at least part of their secondary studies;
  - Anglophones; and
  - residents of Yukon Territory, British Columbia and Alberta.
- Cocaine use in Canada is most prevalent among:
  - the young;
  - men;
  - students and those looking for work;
  - singles; and
  - residents of British Columbia.

There are two patterns of multiple drug use. First, one-third of sleeping pill users are also tranquillizer users and almost one out of every two tranquillizer users also uses sleeping pills. Second, nearly all cocaine users have also used cannabis in the past twelve months. Cannabis users have used cocaine in the past twelve months much more frequently than has the general public. Cocaine and cannabis users are also more frequent users of stimulants.

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Introduction

The Health Promotion Survey questioned Canadians on their use of drugs. In this survey, a "drug user" was a person reporting having used, at least once in the 12 months prior to the survey, one of the following drugs: sleeping pills; stimulants; tranquillizers; cocaine; or marijuana or hashish. While there are many other categories of drugs that could have been included, those included were the more likely to have been used by the survey's target population, people 15 years and older. Also, they are the drugs that have been studied in other surveys of Canadian adults,[1] thus permitting comparisons to be made.

The questions ranged from asking people whether one of the suggested drugs was used in the past twelve months, to asking about: the perceived effects of marijuana use; the use of marijuana by spouse and friends; the intention to reduce drug use in the next year; the need for information on marijuana; and how important it is for governments to deal with drugs. Most of the questions on drugs are found immediately following those on alcohol in the questionnaire (Q. 49-51, 69 in Appendix B).

There have been concerns expressed about the validity of self-report data on drug use, and some studies suggest under-reporting in certain populations. The general validity of self-report data is supported by a growing body of literature.[2] In addition, there is some evidence that telephone interviews with adults yield reported rates of drug use which are similar to those obtained in a face-to-face interview.[2]

On the other hand, under-reporting may not affect all groups equally. For example, it may vary from province to province depending on prevailing social norms. Therefore, small inter-group differences in the reported rates of drug use should be interpreted with caution.

The "unknown" or "not stated" category is excluded from these tables in this chapter. For most questions, this amounts to no more than 1% of respondents and has little bearing on the results. A notable exception is the 17% who declared that they did not know if marijuana use had any health effects (Q. 51).

The reader should bear in mind that the results are not standardized for characteristics such as age, sex, and socio-economic status. Thus the positive relationship between age and the use of sleeping pills would explain much of the elevated use of this drug by widows, as shown in Table 2.

Licit drugs

Among the five classes of licit drugs listed in Q. 49, sleeping pills and tranquillizers are the most widely used (Figure A). As is shown in Table 1, 8% of adult Canadians report using sleeping pills at least once in the 12 months prior to the survey, while 6% have used tranquillizers.

Sleeping pills

As shown in Figure B, the use of sleeping pills increases sharply with age. The highest proportion of users is found among those 65 years and older; one out of every five Canadians in this group has used sleeping pills in a 12-month period. Women of all ages are more likely to report use than are men, with the highest proportion of female users in the older age groups (23%).

The use of sleeping pills is more prevalent among Francophones (11%) than Anglophones (8%) and Canadians who speak some other language at home (6%) (Table 3). Francophone women are the most likely to use sleeping pills (14%). Canadians who have not progressed beyond high school have the highest frequency of sleeping pill use (9%) (Table 4). This is particularly true of women in this education category (11% — data not shown).

Quebec and British Columbia are the only provinces with a proportion of users above the national average (11% each). The other provinces are at or below the national average with Newfoundland showing the lowest proportion of users (Table 5).

Consistent with the fact that sleeping pill users are mainly women and older Canadians, retired women have the highest prevalence of sleeping pill use (21%), followed by retired men (20%) and women keeping house (12%) (Table 6). Looking at the paid working population exclusively, of whom 5% are sleeping pill users, we find that white collar workers (7%), particularly women (8%), have a higher prevalence of sleeping pill use (Table 7).

The lower the income, the more likely it is that Canadians use sleeping pills. The highest rate of sleeping pill use is found in the lowest income category. This is true both for men (13%) and for women (13%). It is also consistent with the finding that sleeping pill use is more prevalent among women and the elderly, the retired and those keeping house, thus more prevalent among Canadians operating on a limited income (data not shown).

The highest rate of sleeping pill use is found among widows and widowers; more than one out of every five used this type of drug in the twelve months prior to the survey (21% — Table 2). Single Canadians are the least likely to report use of sleeping pills (5%).

FIGURE A: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, AGE 15+, CANADA, 1985**

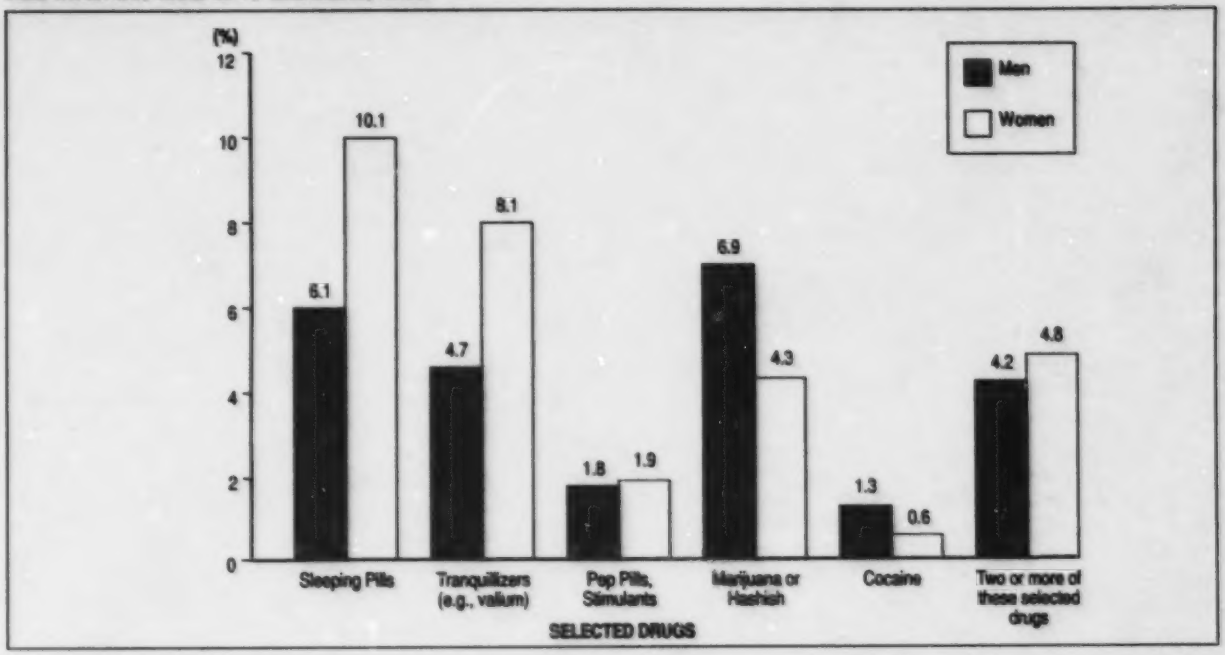
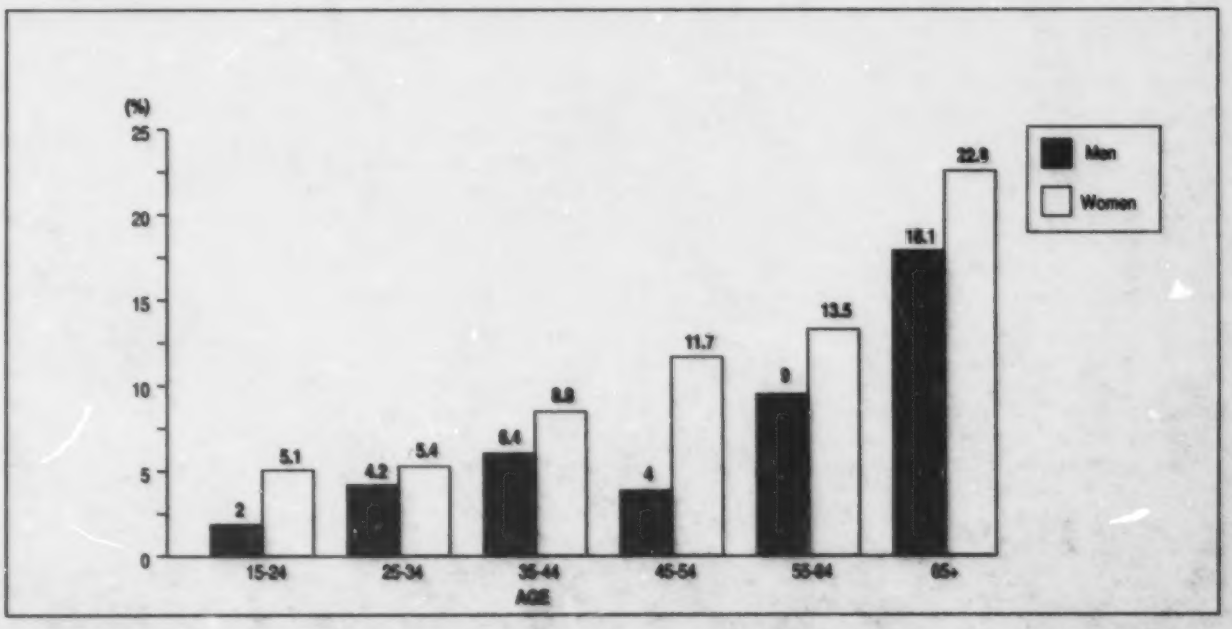


FIGURE B: **PERCENTAGE OF POPULATION WHICH USED SLEEPING PILLS IN THE 12 MONTHS PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985**



Tranquillizers

Nearly one out of every 15 Canadians used tranquillizers in the 12 months prior to the survey (Figure A). As is true for sleeping pills, the frequency of use is higher among women than among men; nearly one out every 12 Canadian women used tranquillizers at least once in the twelve months prior to the survey (Table 1).

As is true for sleeping pills, the use of tranquillizers increases with age, from 3% in the 15-24 age group to 12% in the 65 years and older category. This trend of increased use with age applies both to men and women except for men 45-54 years old who show a lower frequency of use than the younger age groups. Women 65 years or older are the most common users of any age-sex group.

In contrast with the use of sleeping pills, the use of tranquillizers does not seem to be limited to the poorest and least educated Canadians. Use is high in the lowest as well as the highest education levels (Table 4) and among the lowest and highest income groups (data not shown). Women report higher rates of use than men in all income quintiles except the second highest.

Again, as is the case for sleeping pills, Francophones report higher rates of tranquillizer use (10%) than do Anglophones (6%) or others (4%). Francophone women are the most frequent users (13%) when the language and sex variables are considered together and there are, proportionally, almost twice as many Francophone women using tranquillizers as there are men (7% – Table 3).

Marital status is the key to understanding the distribution of tranquillizer use in Canada. One out of every six widowed women in Canada used them in the year prior to the survey (17%). Separated and divorced women are also frequent users of tranquillizers (14%). Nearly one out of every 12 divorced or separated men use tranquillizers (8%). This proportion is high when compared to a national average for men of 5% (Table 2).

Given the above findings, it is not surprising that the highest prevalence of tranquillizer use is found in Quebec (9%), which accounts for 38% of all Canadian tranquillizer users. Ontario is second with 6% of its population using tranquillizers, accounting for 36% of all Canadian tranquillizer users (Table 5).

Having already learned that the use of tranquillizers increases with age, it is not surprising to find the highest rate of use among the retired (11%), as is the case for sleeping pills. Retired women show a higher proportion of users (14%) than do men (9%). Women looking for work and women keeping house also report using tranquillizers more frequently (14% and 9%, respectively) than the national average. Among women wage earners, the largest proportion of users is found among white collar workers (6%) and managers/professionals (6% – Table 7).

Trends in use

The HPS questions on the use of tranquillizers and sleeping pills are the same questions as those used in three earlier surveys of Ontario residents aged 18 and older carried out in 1977, 1982 and 1984[1,3] for the Ontario Addiction Research Foundation (ARF). Comparison of data from these surveys with those from the HPS for Ontario suggests that there has been a decline in the proportion of the Ontario population using these drugs. For example, the 1977 ARF survey[1] found that an estimated 12% of Ontario residents used tranquillizers and 8% used sleeping pills some time in the twelve months prior to the survey compared to the respective figures of 7% and 6% for the same population found by the 1985 Health Promotion Survey.

Two qualifiers are required regarding the above trends. First, the HPS may produce lower estimates of tranquillizer and sleeping pill use than ARF surveys because it includes a low use group excluded from the ARF surveys – 15, 16 and 17 year old youth. Second, if all four survey years are examined it is clear that there is not a simple linear decline in use. ARF data show increases in use between 1982 and 1984 for both sleeping pills and tranquillizers, although none of the usage rates was as high as the 1977 base year. Taking these qualifications into account, the most definitive statement that can be made is that the rate of use of these drugs is not increasing and may be in actual decline. While this conclusion is based on the behaviour of Ontario residents it may well be valid for the country as a whole, if for no other reason than that the Ontario population is such a large proportion of the total Canadian population.

Policy implications

The evidence of this and other surveys suggests that special attention should be given to the use of licit drugs by older women, especially older Francophone women. In Canada, as in most other Western nations, attention around the use of drugs has focused mainly on the use of illicit drugs by youth.[4] In comparison, the use of licit drugs by aging Canadians, particularly women, may be a more serious public health issue.

It appears from these data that loneliness consequent to the breakdown of a marriage, being pensioned or losing one's life companion are strong predictors of the use of sleeping pills and tranquillizers. If temporary use of these drugs is useful in some cases, their long-term use becomes part of the problem of social isolation experienced by many of

these people.[5] Therefore, organizations and groups which support and help these Canadians should consider giving priority to prevent and/or reduce the use of these drugs among their members or clients. A positive sign is that 51% of sleeping pill users and 43% of tranquillizer users report that reducing drug use was the most important change they made in the past year (Q. 109, data not shown).

Stimulants

Only 2% of Canadians report having used stimulants in the 12 months prior to the survey (Table 1, Figure A). While sampling variability is a problem here, the use of stimulants appears to be fairly equally distributed among Canadians except for students who are more likely than others to report using stimulants (4%) (Table 6). Male students have the highest single prevalence of stimulant use (5%). It is among the 15-24 age group that stimulant use seems to be more prevalent (3%) and, particularly, among men of this age group (4%).

Evidence from the HPS and other sources[6,7,8] suggests that more attention should be given to stress among youth. Achieving good grades, passing important exams and, more generally being an adolescent with all the life changes that this implies, all seem to bring about a significant amount of stress with which some youth cope by using stimulants (and other drugs). It seems that stress among youth has been left out of public health priorities. The authors have noted a change in this attitude in the past few years and suggest that mental health programs directed at youth should continue to increase their efforts in areas such as stress management, the prevention of emotional distress, coping skills and other subjects related to coping with the overall changes brought about by this period of life.

Marijuana and hashish

Use of marijuana and hashish

Nearly one out every eighteen Canadians used marijuana or hashish in the twelve months preceding the survey. More men (7%) than women (4%) report such use (Table 1).

Prevalence of use is highest among the younger age groups. Among those 15-24 years old, 12% have used cannabis while for the 25-34 group, the proportion decreases to 9%, and is 3% or less for all other age groups. More men than women report using marijuana or hashish in the year preceding the survey except among 15-24 year-olds: in this group there is parity of use between the sexes. The proportion of marijuana and hashish users is also high among the 25-34 age group (9%). In this case men (13%) are much more likely to report use than women (5%).

It should be no surprise that singles (never married) report greater use (14%). One out of every seven single men use marijuana or hashish (15%) (Table 2).

Cannabis use is twice as frequent among Anglophone Canadians (7%) as among Francophones (3%). There is also a higher rate of cannabis use among Canadians who have completed at least some post-secondary education (Table 4).

Marijuana and hashish use is highest in Yukon Territory (15%), British Columbia (9%) and Alberta (9%). Quebec shows the lowest use; only 3% of the population report use (Table 5).

High rates of marijuana and hashish use are found among students (10%) and those looking for work (12%). This is true both for men and women (Table 6). Among the working population, blue collar workers have a higher proportion of use (8%) than any other category of workers. In terms of income, the highest proportion of users occurs in the second lowest category (8% – data not shown).

Beliefs about occasional use

A list of common beliefs about the health effects of cannabis was suggested to respondents (Q. 51), following a general question about possible effects on physical or mental health (Q. 50).

Almost two-thirds (61%) of Canadians believe that the occasional use of marijuana may affect a person's physical or mental health. Surprisingly, it is among the youngest age group (15-24) that this belief is the strongest (68%). Women are much more likely (73%) than men (49%) to believe that the occasional use of marijuana is harmful (data not shown).

Only 2% of Canadians believe that the use of marijuana relaxes or has some other beneficial effect. As far as negative effects are concerned, 29% identify memory loss or brain damage; 19% some mental or behavioural disorder; and 14% fear addiction or progression to harder drugs. Four percent believe that occasional cannabis use may increase the risk of accidents, injuries and lung damage, while genetic and reproductive problems are also mentioned by 4%. Nine percent of Canadians report not knowing the effects of the occasional use of marijuana.

As shown in Figure C, Canadians who used cannabis in the twelve months preceding the survey do not share the beliefs of non-users about the

occasional use of cannabis. On the other hand, it is surprising to find that users and non-users are equally skeptical that cannabis relaxes or has positive effects.

Needs for information on marijuana

The survey enquired whether or not people felt they needed more information about marijuana and hashish (Q. 12). Only 1% of all Canadians want more information. The demand is most prevalent among the 15-24 age group (5%) and among women in that age group (7%), particularly Francophone women (8% – data not shown). The reported interest in more information increases with amount of education (Table 4 in Chapter 15).

Trends in use

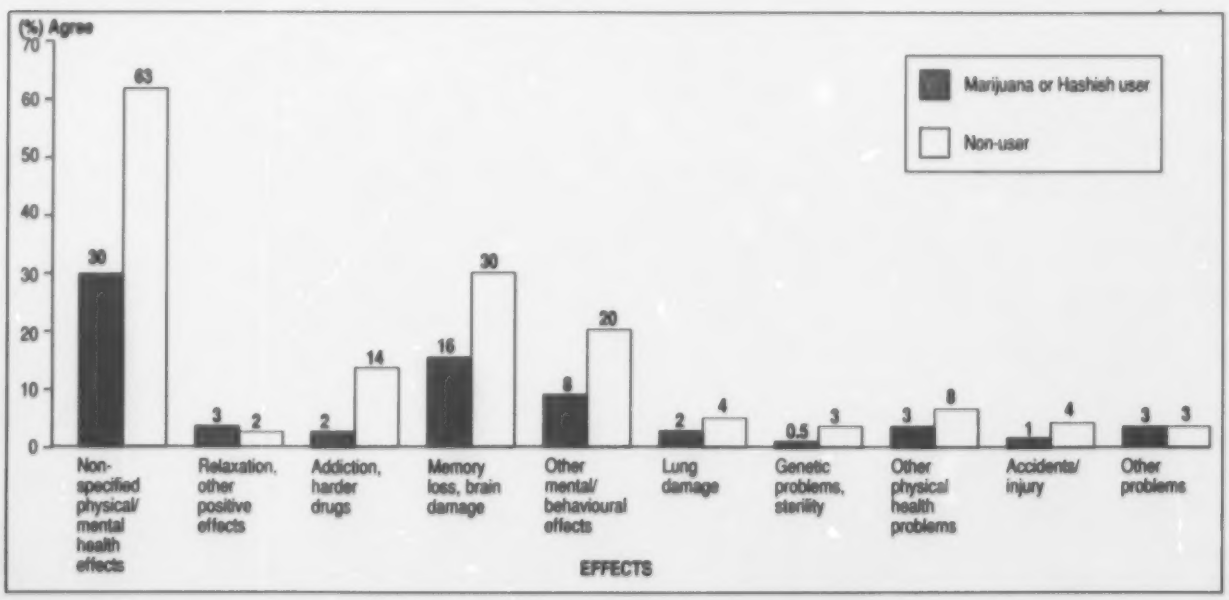
Health and Welfare Canada (HWC) surveyed the use of cannabis among adult Canadians in 1978, 1980 and 1981.

The HPS found lower cannabis use (6%) than the 1978 (10%), 1980 (11%) and 1981 (10%) HWC surveys. These discrepancies could be attributable to differences in sampling methods or in questionnaires. On the other hand, the prevalence of cannabis use in Canada might actually be declining or there may be a new tendency to under-report one's own use of cannabis if this behaviour is becoming less socially acceptable. But since almost all Canadian drug use surveys have found a levelling-off or decreasing trend in cannabis use, except in Prince Edward Island,[9] we suggest that the HPS findings confirm this trend. Moreover, almost half of all drug users report reducing their use of drugs in the twelve months preceding the survey (Q. 106). More than half of the cannabis users (54%), especially men (70%) report doing so (data not shown).

Many specialists will argue that it is at least as important to understand the distribution of drug use as it is to know the number of people using the drug. The HPS findings concur with those of the HWC surveys when it comes to the distribution of drug use. All found that cannabis use is much more prevalent among Canadians under 30 years, men, Anglophones, and residents of British Columbia and the Western provinces. All found that the use of cannabis is much less prevalent in the Maritime provinces and Quebec.

The low prevalence of cannabis use among people over 30 years old suggests either that cannabis use is abandoned by a large number of users by this age, or that generational differences underlie patterns of use.

FIGURE C: **BELIEFS ABOUT THE EFFECTS OF OCCASIONAL USE OF MARIJUANA OR HASHISH, AGE 15+, CANADA, 1985**



Policy implications

The use of cannabis products seems to be levelling off, if not dropping in Canada (as it is in the United States) and most Canadians believe that the occasional use of cannabis is harmful and see no beneficial effects to using it. We seem to have reached an "information saturation" point. This is not to say that information and education efforts should be curbed but rather that these efforts can, at best, maintain the high level of awareness. On the other hand, a phenomenon such as the use of drugs is so intimately related to cultural contexts, which change often among youth, that careful monitoring of the use of cannabis is still a necessity.

Another finding that could be of some importance for policy-makers and program planners is that it would seem that cannabis use is largely abandoned after one has reached 30 years of age. This could be confirmed by longitudinal studies, but if it is not the case, we would most certainly find more users over age 30 since they were in their teens or twenties at the peak of the cannabis consumption years (1970-80).

Finally, it is important to note that the public is very receptive to the government's interventions in the area of drug use but not as a provider of information. This suggests to the authors that the type of action contemplated here by Canadians is the continuation of the enforcement of the law which defines these products as illicit.

Cocaine

Fewer than one in one hundred Canadians (0.9%) used cocaine in the twelve months prior to the survey. Users are found in the 15-24 age group for both sexes (2%) and in the 25-34 age group for men (2% — Table 1). Men are twice as likely to use cocaine (1%) as women (0.6%). Students (2%) and single men (3% — Tables 2, 6) report the highest frequency of cocaine use.

Cocaine use is highest in British Columbia (2%), which accounts for one out of every three cocaine users in Canada. Alberta accounts for one out of seven — a disproportionate share for both provinces (Table 5).

The proportion of cocaine users among the population is apparently much lower in Canada than in the United States. Nineteen percent of 18-25 year-old Americans have used cocaine at least once in a one-year period.[4] Recognizing the possibility that Canadian youth imitate Americans, cocaine use should be monitored thoroughly and frequently so as to prevent a public health problem of the magnitude that our southern neighbour is experiencing.[4,10]

Multiple drug use

One out of every twenty Canadians used more than one drug in the twelve months preceding the survey (Table 8). More women (5%) than men (4%) report doing so, but the difference is insignificant. The use of two or more drugs is more frequent among young (15-24) and older Canadians (65 years old and more), reflecting two distinct patterns — hash-ish and cocaine use by the young, and sleeping pill and tranquillizer use by the elderly.

Quebec and British Columbia have high rates of use of two or more drugs (6% and 5%, respectively). The high occurrence of multiple drug use in Quebec may be explained by the multiple licit drug use pattern, and that of British Columbia by the illicit multiple drug use pattern. Women in Quebec report the highest rate of use of more than one drug in the past twelve months (7%), which again singles them out as major drug users (data not shown).

The use of more than one drug in the past twelve months is more prevalent among Francophones than among Anglophones or others (Table 11), particularly among Francophone women (8% — data not shown).

Eight percent of separated or divorced people report using more than one drug (Table 10). Nearly one out of two women (9% — twice the national average) in these marital situations report multiple drug use. Widows report the second highest use with 8%; this is consistent with the pattern of interaction between the use of tranquillizers and sleeping pills. Singles (never married) have the third highest rate (6%). This is consistent with the pattern of multiple illicit drug use.

Retired Canadians come first in their use of two or more drugs (8%). This finding is consistent with the use of sleeping pills and tranquillizers. Students are second with a reported prevalence of multiple use of 6%, consistent with the use of cannabis and cocaine (Table 13).

Importance of government action on drugs

The HPS presented a series of health topics to respondents and asked them to rate, on a scale of one to ten, how important they felt it was for government to deal with each topic (Q. 79).

Three-quarters of the population feels that drug use is a very important issue for government. This opinion is supported quite equally by the different categories of people but there is a higher concern among the 35-44 age group (82%), the age at which we would find the highest proportion of parents of

teens or pre-teens. Anglophones are somewhat more convinced (76%) than Francophones (73%) of the importance of government action (see also Chapter 15, Table 6).

Lifestyle issues

This section presents findings on a variety of issues related to the lifestyle of drug users.

The reported drug use of drinkers is not different from that of the general population but smokers report more cannabis use than the Canadian average (Table 9).

After reducing their drug use, the second most frequent thing that drug-using Canadians report doing to improve their health in the year prior to the survey was to receive medical treatment. Almost one out of every four (23%) sleeping pill users and one out of every five (20%) tranquillizer users reported doing so (data not shown). This should not be surprising in that their tranquillizers and sleeping pills are probably prescribed as part of their treatment.

Table 15 shows that almost three out of every four tranquillizer users find life stressful. This is especially true for men (77%). Cocaine users also find life stressful (68%), and among cocaine users, almost three-quarters of the women (71%) report that their life is stressful. Not surprisingly, more than one out of every two (57%) sleeping pill users reports that her/his life is stressful. More than one out of every two (58%) marijuana and hashish users reports leading a stressful life.

One in five sleeping pill users reports seeing no one on a regular social basis and the proportion increases to one-third for women. Illicit drug users see more people socially on a regular basis than do licit drug users; this is probably related to the fact that licit drug users tend to be in the older age categories.

This final section describes a variety of policy implications. First, the survey suggests that tobacco smokers also use marijuana and hashish to a larger extent than does the overall population. Since these drugs are typically ingested by smoking, there is, for a significant number of Canadians, potential synergy of effects of both smoking habits on the respiratory system. Nevertheless, less than one out of every 25 Canadians believes that smoking marijuana can harm the lungs. This points to the importance of stressing the potential impact of marijuana and hashish smoking on the respiratory system when planning information programs on these substances.

Second, drug users report finding life stressful to a much larger extent than does the overall population. We do not suggest that this relationship is causal but it points to the use of drugs as a coping mechanism, and suggests that their use can only be adequately explained by complex causal systems which address the role that drugs actually play in one's life. Consequently, it also points to the necessity, when it comes to prevention, of addressing broader existential issues such as values clarification, problem solving, stress management and so on.

Third, the findings underline the social isolation of sleeping pill and tranquillizer users. These users are typically older Canadians, mainly women, who have few or no friends to turn to. The HPS data point to this group as most vulnerable to drug use and it is certainly one of the major policy implications of the findings that more should be done to prevent, as much as is medically possible, their use of sleeping pills and tranquillizers.

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TABLE 1: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
AGE						
15-24	4,333	3.5	3.3	3.4	12.2	2.1
M	2,203	2.0*	2.3*	3.9	12.3	2.7*
W	2,130	5.1	4.3	2.9*	12 1	1.6*
25-34	4,476	4.8	4.0	2.0	8.9	1.5*
M	2,225	4.2	3.2*	1.9*	13.3	2.3*
W	2,250	5.4	4.7	2.2*	4.5	–
35-44	3,529	7.6	7.5	0.7*	3.2	–
M	1,769	6.4	6.7	–	4.2*	–
W	1,760	8.8	8.2	–	2.2*	–
45-54	2,520	7.9	6.6	–	1.5*	–
M	1,263	4.0*	3.2*	–	–	–
W	1,257	11.7	10.0	–	–	–
55-64	2,306	11.4	10.0	2.6*	–	–
M	1,108	9.0	8.1	2.8*	–	–
W	1,199	13.5	11.7	2.5*	–	–
65+	2,446	20.8	11.5	1.1*	–	–
M	1,054	18.1	8.0	–	–	–
W	1,392	22.8	14.1	–	–	–

* High sampling variability
– not releasable

TABLE 2: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY MARITAL STATUS AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
MARITAL STATUS						
Married/Common Law	12,074	7.8	5.9	1.5	2.4	0.3
M	5,984	6.6	5.2	1.4	3.0	0.5*
W	6,089	9.0	6.7	1.6	1.8	–
Single	5,327	4.9	4.9	2.8	13.5	2.4
M	2,972	3.5	3.3	2.6	14.7	2.8
W	2,354	6.6	6.8	3.1*	12.0	1.9*
Widowed	1,189	21.3	14.4	–	–	–
M	247	19.5	–	–	–	–
W	943	21.8	16.8	–	–	–
Separated/Divorced	1,017	14.8	11.2	2.4*	8.0	–
M	418	10.8	8.0*	–	9.6*	–
W	599	17.5	13.5	–	6.9*	–

* high sampling variability
– not releasable

TABLE 3: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY LANGUAGE SPOKEN AT HOME AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
LANGUAGE SPOKEN AT HOME						
French	4,928	10.7	9.7	2.4	3.4	1.1
M	2,399	7.0	6.7	1.7*	3.3*	1.0*
W	2,529	14.2	12.5	2.9*	–	1.2*
English	13,165	7.5	5.5	1.7	6.9	0.9
M	6,544	5.7	4.2	1.8	8.8	1.5
W	6,621	9.2	6.7	1.7	5.1	0.4*
Other	1,390	5.6*	4.2*	–	–	–
M	634	7.0*	–	–	–	–
W	755	4.5*	4.8*	–	–	–

* high sampling variability
– not releasable

TABLE 4: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY EDUCATION AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
EDUCATION						
Secondary or less	12,636	8.8	6.5	2.2	4.7	0.8
M	5,972	6.1	4.8	2.0	6.1	0.9*
W	6,664	11.2	8.1	2.3	3.5	0.7*
Some post-secondary	2,487	6.5	4.7	2.0*	9.7	1.5*
M	1,301	6.6	4.6	2.6*	10.1	2.4*
W	1,185	6.4	4.8	–	9.2	–
Post-secondary degree	4,368	7.3	7.1	0.9*	5.7	1.0*
M	2,312	6.0	4.8	–	7.1	1.7*
W	2,055	8.8	9.7	–	4.2	–

* high sampling variability
– not releasable

TABLE 5: PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY PROVINCE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
PROVINCE						
Newfoundland	423	4.9*	2.0*	2.2*	7.0	–
M	211	4.1*	–	3.2*	9.4	–
W	212	5.7*	3.2*	–	4.6*	–
P.E.I.	96	5.8*	4.7*	–	3.5*	–
M	47	4.0*	–	–	4.6*	–
W	48	7.5*	7.0*	–	–	–
Nova Scotia	681	5.2*	3.1*	1.4*	5.4*	–
M	334	4.6*	–	–	7.9*	–
W	347	5.9*	4.4*	–	3.0*	–
New Brunswick	544	8.4	5.9	2.3*	5.0*	–
M	268	6.5*	2.9*	3.8*	7.9*	–
W	277	10.3	8.8	–	–	–
Quebec	5,148	10.9	9.4	2.1*	3.3	–
M	2,506	7.2	6.6	–	3.3*	–
W	2,641	14.4	11.9	2.7*	3.3*	–
Ontario	7,096	6.7	6.4	1.9*	5.4*	–
M	3,462	4.8*	5.2*	–	6.0	–
W	3,634	8.5	7.6	–	4.7*	–
Manitoba	818	7.5	4.5*	1.6*	6.0*	–
M	400	6.7*	–	–	7.1*	–
W	418	8.3	7.1*	–	4.8*	–
Saskatchewan	759	5.4*	4.3*	–	5.9	–
M	378	4.8*	3.1*	–	9.2	–
W	381	5.9*	5.5*	–	–	–
Alberta	1,762	6.0	3.6	1.5*	8.6	1.4*
M	889	5.2	3.2	1.7*	9.2	2.4*
W	873	6.8	4.1	1.3*	5.3	–
B.C.	2,267	10.9	5.4	2.0*	8.7	2.3*
M	1,118	9.8	4.0*	–	11.4	3.0*
W	1,149	12.0	6.8*	–	6.0*	–
Yukon	17	7.3	4.9	–	15.2	–
M	9	–	–	–	18.5	–
W	8	9.1	6.2*	–	11.5	–

* high sampling variability
– not releasable

TABLE 6: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY MAIN ACTIVITY OVER PAST 12 MONTHS AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
MAIN ACTIVITY						
Working	10,414	5.1	4.3	1.5	6.5	1.0
M	6,402	4.2	3.6	1.5	6.8	1.1*
W	4,012	6.6	5.2	1.6*	6.1	0.7*
Looking for work	976	8.1	7.6*	2.5*	12.4	–
M	616	5.8*	3.6*	–	13.4	–
W	360	11.9	14.4	–	10.5	–
Student	2,300	3.7	4.7	4.1	10.3	2.3*
M	1,175	2.3*	3.9	4.5	11.6	3.2*
W	1,125	5.1	5.5	3.6*	9.0	–
Retired	2,172	20.4	11.4	1.7*	–	–
M	1,216	19.6	9.4	–	–	–
W	955	21.3	14.0	2.4*	–	–
Keeping House	3,425	12.4	9.3	1.1*	1.1*	–
M	35	–	–	–	–	–
W	3,390	12.4	9.4	1.1*	1.1*	–

* high sampling variability
– not releasable

TABLE 7: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY EMPLOYMENT CATEGORY AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Sleeping Pills (%)	Tranquillizers (e.g., Valium) (%)	Pep Pills, Stimulants (%)	Marijuana or Hashish (%)	Cocaine (%)
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
EMPLOYMENT CATEGORY						
Managers/Professionals	3,209	5.0	4.9	0.9*	5.4	0.9*
M	1,928	4.8	4.7	–	5.7	–
W	1,281	5.4	5.2	–	5.0*	–
Other white collar	3,723	7.0	4.1	2.4	6.3	0.6*
M	1,452	5.9	1.7*	3.1*	6.3	–
W	2,271	7.7	5.6	1.9*	6.4	–
Blue collar	3,367	3.0	3.9	1.1*	7.9	1.4*
M	2,936	3.0	3.9	1.0*	7.7	1.6*
W	432	–	–	–	8.8*	–

* high sampling variability
– not releasable

TABLE 8: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS** IN THE 12 MONTHS PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or More
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
AGE			
15-24	4,333	12.7	5.3
M	2,203	12.3	4.9*
W	2,130	13.1	5.6*
25-34	4,476	13.3	3.3
M	2,225	15.1	4.2
W	2,250	11.5	2.5*
35-44	3,529	11.4	3.6
M	1,769	10.1	3.6*
W	1,760	12.6	3.7*
45-54	2,520	11.5	2.6*
M	1,263	6.7	–
W	1,257	16.3	4.4*
55-64	2,306	11.8	5.9
M	1,108	8.4	–
W	1,199	14.9	5.8*
65+	2,446	19.0	7.2
M	1,054	15.2	–
W	1,392	21.9	8.3*

* high sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 9: **PERCENTAGE OF POPULATION WHICH USED SELECTED DRUGS** AND WHICH ALSO USED OTHER DRUGS IN THE 12 MONTHS PRECEDING THE SURVEY, BY SEX, AGE 15+, CANADA, 1985**

Percentage which have used the following drugs in the 12 months preceding the survey:

	Population (000's)	Sleeping Pills	Tranquillizers (e.g. Valium)	Pep Pills, Stimulants	Marijuana or Hashish	Cocaine
Total 15+	19,611	8.2	6.4	1.9	5.6	0.9
Men	9,623	6.1	4.7	1.8	6.9	1.3
Women	9,989	10.1	8.1	1.9	4.3	0.6*
USERS OF SELECTED DRUGS IN 12 MONTHS PRECEDING THE SURVEY						
Sleeping pills	1,601	N/A	33.5	9.0	4.6	1.8*
M	591	N/A	34.5	9.9*	7.0*	–
W	1,011	N/A	33.0	8.5	3.2*	–
Tranquillizers	1,260	42.6	N/A	4.9*	6.2	2.5*
M	456	44.7	N/A	–	9.1	–
W	804	41.4	N/A	6.4*	4.6*	–
Stimulants	364	39.7	17.0	N/A	29.1	9.3*
M	171	34.1	–	N/A	34.3	–
W	193	44.7	26.7	N/A	24.5	–
Marijuana or Hashish	1,089	6.8*	7.2	9.7	N/A	13.9
M	659	6.3*	6.3*	8.9	N/A	16.0
W	430	7.6*	8.5*	11.0	N/A	10.5
Cocaine	176	16.1*	18.0*	19.3*	85.7	N/A
M	121	–	–	–	87.6	N/A
W	55	–	–	32.8	81.7	N/A
Alcohol	16,011	7.3	5.7	1.6	6.7	1.1
M	8,252	5.7	4.4	1.7	7.9	1.4
W	7,759	9.0	7.1	1.5	5.5	0.7*
Tobacco	6,630	8.0	7.5	2.4	9.9	1.9
M	3,426	5.8	5.7	1.8*	11.4	2.5
W	3,204	10.4	9.5	3.1	8.3	1.2*

* high sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 10: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS** IN THE 12 MONTHS PRECEDING THE SURVEY, BY MARITAL STATUS AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or More
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
MARITAL STATUS			
Married	12,047	11.0	3.3
M	5,984	9.5	3.5
W	6,089	12.6	3.1
Single	5,327	14.8	5.9
M	2,972	14.8	5.2
W	2,354	14.8	6.7
Widowed	1,189	21.4	7.7
M	247	19.7	–
W	943	21.9	8.9
Separated/ Divorced	1,017	18.9	8.3
M	418	15.8	7.2*
W	599	21.0	9.0*

* high sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 11: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS** IN THE 12 MONTHS PRECEDING THE SURVEY, BY LANGUAGE SPOKEN AT HOME AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or More
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
LANGUAGE SPOKEN AT HOME			
English	13,165	13.9	3.9
M	6,544	13.2	3.9
W	6,621	14.5	4.0
French	4,928	13.0	6.7
M	2,399	9.3	5.1
W	2,529	16.4	8.3
Other	1,390	7.0	2.2*
M	634	4.5*	4.7*
W	755	9.1	–

* High sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 12: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS** IN THE 12 MONTHS PRECEDING THE SURVEY, BY LEVEL OF EDUCATION AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or More
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
EDUCATION			
Secondary or less	12,636	13.2	4.6
M	5,972	10.8	4.2
W	6,664	15.3	4.9
Some post-secondary	2,487	15.2	4.1
M	1,301	16.8	4.2*
W	1,185	13.5	4.0*
Post-secondary degree	4,368	11.9	4.6
M	2,312	10.9	4.2
W	2,055	13.0	4.9

* high sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 13: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS** IN THE 12 MONTHS PRECEDING THE SURVEY, BY EMPLOYMENT CATEGORY AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or More
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
EMPLOYMENT CATEGORY			
Managerial/ Professional	3,209	8.3	4.0
M	1,928	7.2	4.4
W	1,281	9.9	3.0*
Other white Collar	3,723	13.5	3.2
M	1,452	9.7	3.5*
W	2,271	15.9	2.8
Blue Collar	3,367	11.3	2.8
M	2,936	10.9	3.0
W	432	13.4	–

* high sampling variability
** Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marijuana or hashish; and cocaine.
– not releasable

TABLE 14: **PERCENTAGE OF POPULATION WHICH USED ONE OR MORE SELECTED DRUGS•• IN THE 12 MONTHS PRECEDING THE SURVEY, BY MAIN ACTIVITY AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% 1 Drug	% 2 Drugs or more
Total 15+	19,611	13.7	4.5
Men	9,623	11.7	4.2
Women	9,989	14.5	4.8
MAIN ACTIVITY			
Working	10,414	11.2	3.0
M	6,402	9.5	3.5
W	4,012	13.8	2.8
Looking for work	976	18.6	5.3•
M	616	16.6•	—
W	360	22.3	—
Student	2,300	11.7	6.3
M	1,175	13.1	5.5•
W	1,125	10.3	7.1•
Retired	2,172	18.1	7.7
M	1,216	16.6	6.8•
W	955	20.1	8.8•
Keeping house	3,425	14.5	4.6
M	35	—	—
W	3,390	14.5•	4.6•

• high sampling variability
•• Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marjiuana or hashish; and cocaine.
— not releasable

TABLE 15: **SELF-REPORTED LEVELS OF STRESS AMONG USERS OF SELECTED DRUGS•• IN THE 12 MONTHS PRECEDING THE SURVEY, BY TYPE OF DRUG USE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% Life Very or Fairly Stressful	% Life Not Very or Not at All Stressful
Total 15+	19,611	47.6	52.1
Men	9,623	49.3	50.3
Women	9,989	46.0	53.5
USERS OF SELECTED DRUGS IN 12 MONTHS PRECEDING SURVEY			
Sleeping pills	1,601	58.8	40.9
M	591	53.7	46.3
W	1,011	61.7	37.7
Tranquillizers	1,260	71.0	29.0
M	456	77.0	23.0
W	804	67.6	32.4
Stimulants	364	51.8	48.2
M	171	38.1•	62.0
W	193	63.9	36.1•
Marijuana or Hashish	1,089	57.5	42.5
M	659	56.6	43.4
W	430	58.9	41.1
Cocaine	176	67.9	32.1•
M	121	66.5	33.5•
W	55	71.1•	—

• high sampling variability
•• Selected drugs include: sleeping pills; tranquillizers (e.g., Valium); pep pills, stimulants; marjiuana or hashish; and cocaine.
— not releasable

Section

This section is concerned with the prevalence of four important procedures widely promoted as techniques for the early detection of chronic diseases. The two chapters are unique in their focus on secondary prevention since all of the other sections of this report deal with primary disease prevention or health promotion.

In Chapter 6, Susan Garceau reports on the frequency of blood pressure check-ups in the population, knowledge of and beliefs about hypertension, and intentions for monitoring and control in the year following the survey. The findings provide both encouragement and a challenge regarding this very important disease.

The focus of Chapter 7, also by Garceau, is on women and cancers of the reproductive system. She reports the regularity and recency of Pap smears, breast examinations by health professionals, and breast self-examinations. The chapter has important implications for the promotion of these practices: much progress has been made since 1978, but much remains to be done.

6

Screening for High Blood Pressure

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Highlights

- 57% of all Canadians report that they had their blood pressure checked within the six months preceding the survey.
- Women are more likely than men across all ages to have their blood pressure checked regularly.
- The frequency of blood pressure monitoring increases with age for both sexes.
- Men under the age of 45 are the least likely to have had their blood pressure checked within the six months preceding the survey.
- Men and women over 65 years are most likely to believe that you only need to have your blood pressure checked if you have a problem.
- Frequency of blood pressure monitoring is positively affected by education, stress, body weight, personal beliefs about diet, attitudes toward hypertension as a public health issue, and perceived need for information on hypertension.
- The majority of the population understands the importance of blood pressure screening in the absence of overt disease — only 17% believe that it is important to get your blood pressure checked *only* if you have a problem.
- Of those who want more health information, 44% want information on high blood pressure. In total, this is only about 10% of the population.
- 57% of Canadians feel that it is important for the government to be involved in the hypertension issue.

Introduction

This chapter examines the levels and correlates of an important disease-detection practice, namely blood pressure screening. In an attempt to describe the extent of regular monitoring and to determine the need for information and intervention, adult Canadians were asked about their beliefs, attitudes, behaviours and intentions as they relate to blood pressure screening and hypertension control.

This chapter focuses on describing those individuals who have had their blood pressure checked in the six months preceding the survey (Q. 18). Although the Task Force on the Periodic Health Examination[1] recommends blood pressure measurement on every visit to a health professional, and no less than once in every five-year period, we have adapted a stricter guideline here. In addition to examining behaviour, we focus on those people whose beliefs may be putting them at risk – people who believe that blood pressure should only be checked if one has a problem (Q. 22). Between 1% and 5% of the population did not respond to these questions; these non-response categories are not included in the tables.

The correlates examined in this chapter include the demographic variables of age, sex, income, education, province and language. The data collected are cross-sectional and, even though tables are presented as if there are dependent and independent variables, no cause-and-effect relationships can be inferred.

The reader should be aware that the tables present non-standardized data and that differences in population characteristics may affect some inter-group comparisons. The issue of standardization is examined further in Appendix A.

High blood pressure is one of the major risk factors for cardiovascular disease.[2] In general, the prevalence of elevated diastolic blood pressure is higher among men than women.[3,4] Approximately 22% of men have uncontrolled high blood pressure as compared to 13% of women, according to Canada Health Survey data.[5] Data from the 1981 Canada Fitness Survey[6] indicate that 29% of men and 18% of women exceed 140/90 on a single reading after a five-minute rest. Many individuals, especially men, are unaware that they have high blood pressure, and if they are aware, do not have it adequately under control.[2,7] While a telephone survey cannot assess hypertension, it is a useful means of determining related beliefs and monitoring behaviours.

Frequency of monitoring

Subjects were asked when they last had their blood pressure checked (Q. 18). Over half (57%) of the population report that they had their blood pressure checked in the six months prior to the survey; only 2% report that they have never had their blood pressure checked (Table 1).

Population patterns

Age is highly related to self-reported frequency of blood pressure monitoring (Figure A). Those under 45 years of age are less likely to have had their blood pressure checked in the six months prior to the survey than those over 45 years (Table 1). In that six month period, 45% of 15-24 year-olds report that they had their blood pressure checked while 77% of those over 65 years did so (Figure A).

While 63% of all women report that they had their blood pressure checked within that six months period, only 50% of men report that they had done so. This sex differential is most evident among those aged 15-34 years and it virtually disappears among the middle age groups. Women and men aged 45 to 64 years are equally likely to report that they had their blood pressure checked in the six months preceding the survey (Table 1).

Adult Canadians with secondary education or less are slightly more likely to report that they have never had their blood pressure checked. Nevertheless, the majority of the sample, regardless of amount of education, report having their blood pressure checked in the six month period (Table 2).

In terms of provincial and language differences, those in Quebec and non-English speakers are somewhat more likely to report that they had their blood pressure checked in the six months preceding the survey than those who speak English and reside in the other provinces.

Knowledge of hypertension

To test their knowledge of one aspect of hypertension, respondents were asked if they agreed that "you only need to have your blood pressure checked if you think you have a problem" (Q. 22). In effect, answers vary depending on whether individuals are aware that hypertension is often symptomless and that regular blood pressure checks are the only reliable means to detect the condition.

Only 17% of the population believe that you only need to get your blood pressure checked if you have a problem (Table 3). Women are slightly more likely than men to believe in the importance of

routinely having blood pressure checked, as do those who are in the highest income quintile, have higher education, or are English-speaking (Table 4).

Respondents were asked how important it was for the government to deal with hypertension (Q. 79). Although this question is ambiguous, 57% of the population report that it is very important for the government to be involved in the hypertension issue. Women are 11% more likely than men to espouse this belief (Table 3). Canadians with college or university education are also firm believers in the importance of a government role in hypertension, but there are no systematic differences related to income (Table 4).

Respondents were also asked if they felt they needed more information on hypertension (Q. 12). Of those who want more health information, 44% report that they needed more information on hypertension. This amounts to only 10% of the total population, (Table 4, Chapter 15). There is a slight tendency for those who are older to feel that they need more information (Table 3).

Beliefs, behaviours and blood pressure checks

Adult Canadians who have had their blood pressure checked in the six months preceding the survey are less likely than the general population to believe that such check-ups are needed only when a problem exists (Table A). Beliefs which are supportive of regular blood pressure monitoring in the absence of symptoms are held to a greater degree by those under 45 years of age. There are no sex differences in these beliefs (Table A).

To get a better picture of people who have had a recent blood pressure check we can look at other health behaviours which may also be risk factors for cardiovascular disease. Do those people at risk acknowledge it and take steps to assess their risk through blood pressure checks? People who smoke cigarettes are neither more nor less likely than those in the general population to have had their blood pressure checked in the six months prior to the survey, but those who have 15 or more drinks a week are far less likely to do so. Individuals who are overweight/obese tend to report that they had their blood pressure checked within the six month period to a greater degree than did normal or underweight individuals. People who report that their lives are very stressful are more likely than those in the general population to have had their blood pressure checked in the six month period.

Adult Canadians who had their blood pressure checked within the six months preceding the survey appear to be more aware of issues surrounding hypertension. They are more likely than those in the general population to: want more information on hypertension, believe that it is important for them to limit their cholesterol and salt intake, feel that it is very important for the government to deal with hypertension, and intend to get their blood pressure checked in the next year.

TABLE A: **PERCENTAGE OF POPULATION WHICH REPORTED HAVING A BLOOD PRESSURE CHECK IN THE SIX MONTHS PRECEDING THE SURVEY, BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Percentage of Population Which Reported Having a BP Check in the Six Months Preceding the Survey
Total 15+	57%
SELECTED CHARACTERISTICS	
"Need BP checked only if you have a problem"	
Agree	47%
Disagree	59%
Non-Smoker	58%
Smoker	55%
Sedentary	58%
Exercise regularly	56%
Life not very stressful	56%
Life very stressful	62%
Drink −15 drinks per week	58%
Drink 15+ drinks per week	44%
Underweight	59%
Normal weight	53%
Overweight/Obese	61%
"Need more information on blood pressure"	64%
"Do not need more information"	56%
"Important to limit cholesterol intake"	62%
"Not important to limit cholesterol intake"	56%
"Important to limit salt intake"	67%
"Not important to limit salt intake"	56%
"Important for government to deal with blood pressure:"	
Not important	54%
Moderately important	52%
Very important	60%
Had BP checked/tried to control BP in year preceding survey	94%
Intend to have BP checked/ try to control BP in year following survey	63%

It is also instructive to examine the characteristics of those who believe blood pressure monitoring is not needed unless a problem exists. Compared to the general population, where only 17% are in agreement with this view, smokers, sedentary people, and heavy drinkers are more likely to hold this belief (Table B). Others of this opinion are those who are underweight, who want no information on blood pressure, who believe cholesterol and salt are acceptable in the diet, and who attach little importance to a government role in hypertension (Table B).

TABLE B: **PERCENTAGE OF POPULATION WHICH BELIEVES YOU NEED TO HAVE YOUR BLOOD PRESSURE CHECKED ONLY IF YOU HAVE A PROBLEM, BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Percentage of Population Which Believes You Need to Have Your BP Checked Only if You Have a Problem
Total 15+	17%
SELECTED CHARACTERISTICS	
Smoker	20%
Exercise regularly	17%
Life very stressful	21%
Drink more than 15 drinks per week	21%
Underweight	21%
Normal weight	16%
Overweight/Obese	17%
"Need more information on blood pressure"	14%
"Important to limit cholesterol intake"	19%
"Important to limit salt intake"	11%
"Important for government to deal with blood pressure:"	
Not important	40%
Moderately important	18%
Very important	12%

Behaviours and intentions regarding monitoring and control

People were asked about the changes they had made in the year preceding the survey (Q. 106), and the changes they intended to make in the upcoming year to improve their health (Q. 109).

Very few individuals, regardless of age, indicate that having their blood pressure checked or attempting to control their blood pressure was their "most important" effort to improve their health over the year preceding the survey (Table 5). However, almost all (94%) of those who report having had their blood pressure checked in the six month period say they did so in an effort to improve their health (Table A).

Similar patterns emerge regarding future intentions, with only a small percentage of the entire sample reporting that they intended to get their blood pressure checked in the upcoming year to improve their health (Table 5). Yet, the majority (63%) of those who had their blood pressure checked in the six months prior to the survey stated that they intended to have their blood pressure checked or that they would try to control their blood pressure in the upcoming year (Table A).

Conclusions and implications

Hypertension is sometimes called "the silent killer" because it is often symptomless and, when undetected, can lead to heart disease and strokes. As there are usually no overt symptoms in the early stages of essential hypertension, blood pressure may increase for many years without the individual being aware of it.[3,8] Hence, it is crucial that blood pressure screening be seen as an important preventive measure by those at risk of hypertension. The results of this survey demonstrate that 75% of the population had their blood pressure checked in the year preceding the survey. These results are comparable to those of the United States National Health Interview Survey where 73% of the population reported a blood pressure check within the year preceding the survey.[9]

As the risk of hypertension increases with age, it is heartening to see that frequent check-ups for hypertension are practiced more diligently by older Canadians. However, the results also show that other high-risk individuals are not as likely as older persons to have their blood pressure checked.

The findings suggest a fairly high degree of awareness regarding the need for regular blood pressure checks. However, one should not conclude from this that the public is well-informed about hypertension, its causes and control. The tiny number of Canadians who stated that they would be getting their blood pressure checked in the year following the survey is an important qualification in this regard.[10]

The discrepancy between this number and those who report a check in the preceding year is substantial. It suggests that such check-ups are initiated

by health professionals — during physician visits for other purposes, in clinics at work or in the community, or on other chance bases. While such methods appear to reach the majority of adults, one must be concerned about those missed by these measures.[11] The lack of association between education, income, and blood pressure check-ups is encouraging, but points to the need for further analysis to identify the overlooked groups.

The devastating consequences of uncontrolled hypertension, contrasted with the value of early detection, strongly suggest that these results should not be taken as a reason for complacency, even though they are positive in some respects.

FIGURE A: **PERCENTAGE OF POPULATION WHICH HAD BLOOD PRESSURE CHECKED IN THE 6 MONTHS PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985**

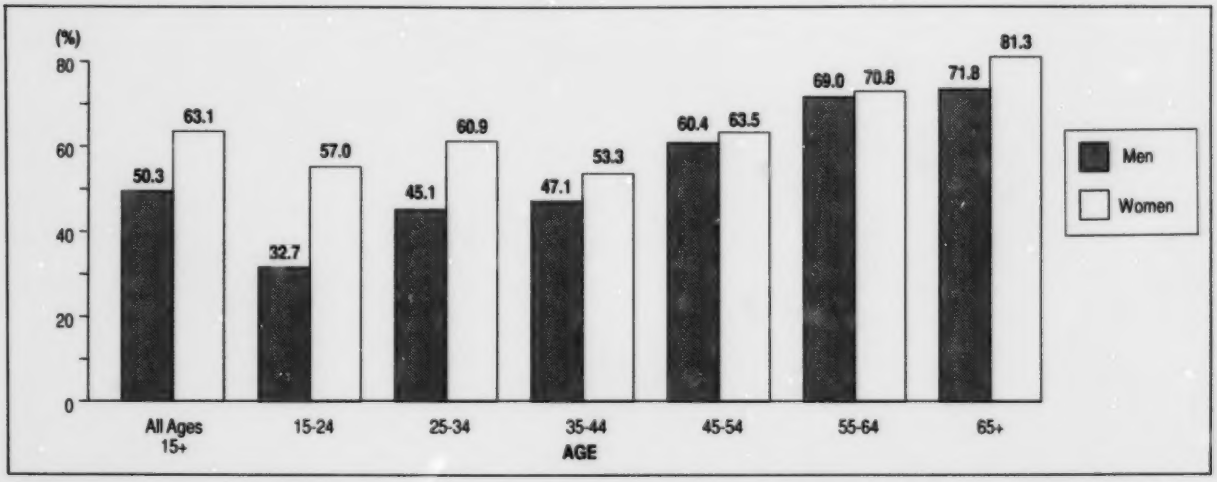

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TABLE 1: **SELF-REPORTED FREQUENCY OF BLOOD PRESSURE MONITORING, BY AGE AND SEX, AGE 15+, CANADA, 1985**

		"When did you last have your blood pressure checked?"				
	Population (000's)	% In past 6 months	% In past 6-12 months	% In past 1-2 years	% More than 2 years ago	% Never
Total 15+	19,611	56.8	18.0	11.1	9.6	2.4
Men	9,623	50.3	17.7	12.5	13.6	3.6
Women	9,989	63.1	18.2	9.9	5.9	1.3
AGE						
15-24	4,333	44.6	16.4	14.8	12.7	7.1
M	2,203	32.7	17.5	16.1	19.4	9.8
W	2,130	57.0	15.2	13.5	5.8	4.3
25-34	4,478	53.1	20.1	14.4	8.7	1.8*
M	2,225	45.1	20.9	15.5	13.7	2.7*
W	2,250	60.9	19.4	13.4	3.9	–
35-44	3,520	50.2	25.2	10.8	12.3	1.5*
M	1,769	47.1	22.7	12.1	15.8	1.4*
W	1,760	53.3	27.8	9.5	8.8	–
45-54	2,520	62.0	18.3	9.1	8.8	–
M	1,263	60.4	17.1	10.7	9.2	–
W	1,257	63.5	19.5	7.5	8.5	–
55-64	2,306	70.0	11.8	7.2	8.2	1.0*
M	1,108	69.0	8.4	6.5*	11.5	2.0*
W	1,199	70.8	15.0	7.8	5.2*	–
65+	2,446	77.2	11.7	5.1	4.2	1.2*
M	1,054	71.8	13.8	7.5	4.8*	2.1*
W	1,392	81.3	10.0	3.2*	3.8*	1.7*

* high sampling variability
– not releasable

TABLE 2: **SELF-REPORTED FREQUENCY OF BLOOD PRESSURE MONITORING, BY INCOME, EDUCATION, PROVINCE, AND LANGUAGE, AGE 15+, CANADA, 1985**

"When did you last have your blood pressure checked?"

	Population (000's)	% In past 6 months	% In past 6-12 months	% In past 1-2 years	% More than 2 years ago	% Never
Total 15+	19,611	56.8	18.0	11.1	9.6	2.4
INCOME QUINTILE						
Lowest	2,828	61.4	15.2	11.4	8.7	1.7*
Second	2,437	58.4	18.2	10.5	10.7	1.2*
Third	2,614	54.2	20.6	12.9	9.9	2.4*
Fourth	2,187	52.8	19.6	10.5	14.2	2.1*
Highest	2,568	59.5	19.3	10.7	7.7	1.9*
EDUCATION						
Less than secondary	7,173	58.8	15.2	9.7	9.1	3.7
Completed secondary and some post-secondary	7,871	55.1	20.0	11.3	10.6	1.8
Degree or diploma	4,368	55.9	18.8	13.5	9.0	1.6*
PROVINCE						
Newfoundland	423	51.3	18.5	11.4	12.0	4.3*
P.E.I.	96	50.4	17.4	12.7	11.7	4.3*
Nova Scotia	681	56.6	15.0	10.9	11.0	3.4*
New Brunswick	544	54.1	15.4	10.5	12.2	3.9*
Quebec	5,148	63.8	12.9	9.3	9.9	3.1*
Ontario	7,096	56.0	20.4	11.4	8.5	–
Manitoba	818	54.8	18.1	13.2	10.1	2.2*
Saskatchewan	769	53.2	16.0	14.7	11.2	3.3*
Alberta	1,762	53.1	20.9	10.4	10.6	2.6*
B.C.	2,267	50.7	21.4	13.1	9.5	2.8*
Yukon	17	51.8	19.4	12.3	11.3	2.1*
LANGUAGE						
English	13,165	54.2	20.0	11.5	9.9	2.3
French	4,928	62.5	13.6	9.9	9.6	2.9

* high sampling variability
– not releasable

TABLE 3: **BELIEFS REGARDING HYPERTENSION, BY AGE AND SEX, AGE 15+, CANADA, 1985**

		"You only need to have your blood pressure checked if you think you have a problem."	"How important do you feel it is for the government to deal with hypertension?"	"Do you feel that you need more information on hypertension?"
	Population (000's)	% Agree	% Very Important (8-10)	Yes (% of Those Wanting Information on any Topic)
Total 15+	19,611	17.3	56.9	44.4
Men	9,623	19.8	51.5	45.8
Women	9,989	14.9	62.1	43.4
AGE				
15-24	4,333	17.9	55.7	40.2
M	2,203	22.7	52.7	38.8
W	2,130	12.9	58.8	41.1
25-34	4,476	16.3	60.7	41.7
M	2,225	19.6	53.7	46.7
W	2,250	13.0	67.7	38.0
35-44	3,529	13.4	59.8	47.1
M	1,769	13.3	54.1	51.2
W	1,760	13.5	65.5	43.7
45-54	2,520	22.5	55.2	54.3
M	1,263	23.4	48.2	57.5
W	1,257	21.7	62.1	51.6
55-64	2,306	14.0	53.3	32.8
M	1,108	17.4	45.8	15.9
W	1,199	10.8	60.2	40.3
65+	2,446	21.5	53.1	53.4
M	1,054	23.7	49.7	50.3
W	1,392	19.8	55.7	55.4

TABLE 4: **BELIEFS REGARDING HYPERTENSION, BY INCOME, EDUCATION, PROVINCE AND LANGUAGE, AGE 15+, CANADA, 1985**

		"You only need to have your blood pressure checked if you think you have a problem."	"How important do you feel it is for the government to deal with hypertension?"	"Do you feel that you need more information on hypertension?"
	Population (000's)	% Agree	% Very Important (8-10)	Yes (% of Those Wanting Information on any Topic)
Total 15+	19,611	17.3	56.9	44.4
INCOME QUINTILE				
Lowest	2,826	19.9	57.5	41.0
Second	2,437	15.8	58.8	48.7
Third	2,614	13.4	61.1	46.5
Fourth	2,179	15.9	59.3	46.4
Highest	2,513	12.1	55.6	47.2
EDUCATION				
Less than secondary	7,173	20.2	45.0	30.1
Completed secondary and some post-secondary	7,871	16.6	46.8	45.7
Degree or diploma	4,368	13.1	59.0	23.0
PROVINCE				
Newfoundland	423	19.0	67.9	47.7
P.E.I.	96	17.3	60.4	43.2
Nova Scotia	681	13.5	63.8	52.6
New Brunswick	544	18.9	64.4	34.6
Quebec	5,148	23.1	61.4	53.1
Ontario	7,096	15.7	53.5	43.4
Manitoba	818	13.1	54.1	40.2
Saskatchewan	759	15.6	52.3	35.3
Alberta	1,762	15.3	52.9	30.0
B.C.	2,267	13.3	56.9	36.6
Yukon	17	12.8	54.0	29.6
LANGUAGE				
English	13,165	13.3	56.9	41.0
French	4,928	24.0	58.2	50.4

TABLE 5: **PAST IMPROVEMENTS IN HEALTH AND INTENTIONS TO CHANGE IN TERMS OF BLOOD PRESSURE MONITORING BY SEX, EDUCATION AND LANGUAGE, AGE 15+, CANADA, 1985**

	Population (000's)	"Blood pressure checked in past year. Most important measure for health." % Yes	"Attempt to control blood pressure in past year. Most important measure for health." % Yes	"Intend to have blood pressure checked in next year to improve health." % Yes
Total 15+	19,611	0.6	0.5	0.9
Men	9,623	0.4*	0.7*	0.8*
Women	9,989	0.7*	0.3*	0.9*
EDUCATION				
Less than secondary	7,173	0.8*	0.8*	0.9*
Completed secondary and some post-secondary	7,871	0.4*	0.3*	0.6*
Degree or diploma	4,368	0.6*	–	1.4*
LANGUAGE				
English	13,165	0.6*	0.7*	0.8*
French	4,928	–	–	1.4*

* high sampling variability
– not releasable

7

Female Preventive Health Practices

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Highlights

- More than half of all women have regular pap smears.
  - 56% of adult women report that they have had a Pap smear during the year preceding the survey.
  - 14% of women have never had a Pap smear. These women are most likely to be under 25 years of age or 65 and over.
- Breast examination is frequently done by doctors but less frequently by women themselves.
  - 65% of all adult women have had their breasts examined by a doctor or nurse during the year prior to the survey.
  - 75% of all women have been shown how to examine their own breasts.
  - Yet, only 38% of all women examine their own breasts every month.

Introduction

This chapter examines the levels and correlates of the two major preventive health practices undertaken by women. Subjects were asked about their behaviour and knowledge with respect to Pap smears and breast examination. Both of these practices are recommended as screening for cancer, on the proven assumption that detecting cervical or breast abnormalities early will improve the prognosis of the disease, if it is in fact present.[1]

Women were asked about their knowledge and behaviour (Q. 61-65: see Appendix B). While self-reports of behaviours are personally relevant, they may be influenced by social desirability bias. This is especially true concerning cancer-screening behaviours which have been widely publicized and promoted. The issue of breast cancer is also extremely sensitive for women because breasts are linked to feelings of femininity. While the answers to the questions about female preventive health practices may be coloured by all of these factors, they nonetheless can give us a sense of the normative climate surrounding these behaviours. They also permit comparisons over time, and comparisons between sub-groups, assuming that all women are more or less equally affected by these influences.

The correlates examined in this chapter include the demographic variables of age, income, education, province and language. As the data are cross-sectional, it is impossible to discuss issues of cause and effect even though tables may appear to have dependent and independent variables. Approximately 3% of the female population did not respond to this set of questions, perhaps indicating that these individuals were sensitive to these questions. These non-responses are not reported in the tables.

The reader should be aware that the tables present non-standardized data and that differences in population characteristics may affect some inter-group comparisons. For example, the much higher frequency of recent Pap smears in Alberta compared to New Brunswick is probably partly due to the higher average income in the western province, since income is known to be related to regularity of Pap smear tests. The issue of standardization is examined further in Appendix A.

According to 1981 figures from Statistics Canada, cancer of the cervix and uterus is the fourth leading cause of death for women aged 25 to 44 years.[2] Its importance as a cause of death decreases with age, becoming the seventh or eighth leading cause of death among women over 50 years of age.[3] Breast cancer ranks first as a cause of cancer death for Canadian women from age 30 to 74.[2] According to one estimate,[4] if current cancer risks do not change, women will have a 9% lifetime risk for breast cancer. Because of the high levels of mortality involved, and because Pap Smears and breast examinations have been widely promoted in Canada, questions on these preventive measures were a natural topic for the Health Promotion Survey.

Frequency of pap smears

Women were asked, "When was the last time you had a Pap smear test for cancer?" (Q. 65). Over half of all Canadian women (56%) report having had a Pap smear during the year preceding the survey. Another 15% of women report having had a Pap smear within the preceding 2-3 years while a similar proportion (14%) say they have never had one (Table 1).

Population patterns

The women who are most likely to have had a Pap smear within the one-year period are between 25 and 44 years old. Conversely, women who have never had a Pap smear are either young (15-24 years) or over 65 years. (Figure A)

There is a clear trend for women who have attained higher education and who are in the higher income quintiles to be more likely than other Canadian women to have had a Pap smear within the year preceding the survey (Table 1). Women who have never had a Pap smear are most likely to have lower incomes and lower educational status; these women also tend to be younger. Women who are French-speaking are more likely than English-speaking women to have never had a Pap smear. Women who reside in Prince Edward Island, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and Yukon Territory most frequently report having had a Pap smear within a one-year period.

To summarize the results of this question relating to self-reported frequency of Pap smears, it would appear that women who are most likely to report practicing this preventive cancer-screening behaviour are between 25 and 44 years, have attained higher education and incomes, and reside in Alberta or Yukon Territory.

Discussion

The Pap smear is a method for distinguishing normal from abnormal cells of the vagina, uterus and cervix.[5] A Pap smear is composed of about 100 cells gathered from the cervix and surrounding area. The smear can detect gynecological problems as diverse as yeast infections, trichomoniasis, condyloma, precancerous changes, and cancer.[6]

There has been discussion in recent years regarding the appropriate target group for regular Pap smears. According to the Canadian Medical Association,[7] Pap smears are not necessary for women who have never had sexual intercourse, women over 60 years of age whose previous smears have been negative, and women who have had a hysterectomy for benign disease. Women who have had sexual intercourse should have annual Pap smears between the ages 18 and 35 years and every five years thereafter. Women who responded to the Health Promotion Survey appear to be following these recommendations, with women between 25 and 44 years of age tending to report having annual Pap smears. It is important to note that the adoption of this preventive practice may not necessarily be an example of self-motivated behaviour but rather an example of routine screening by medical practitioners.

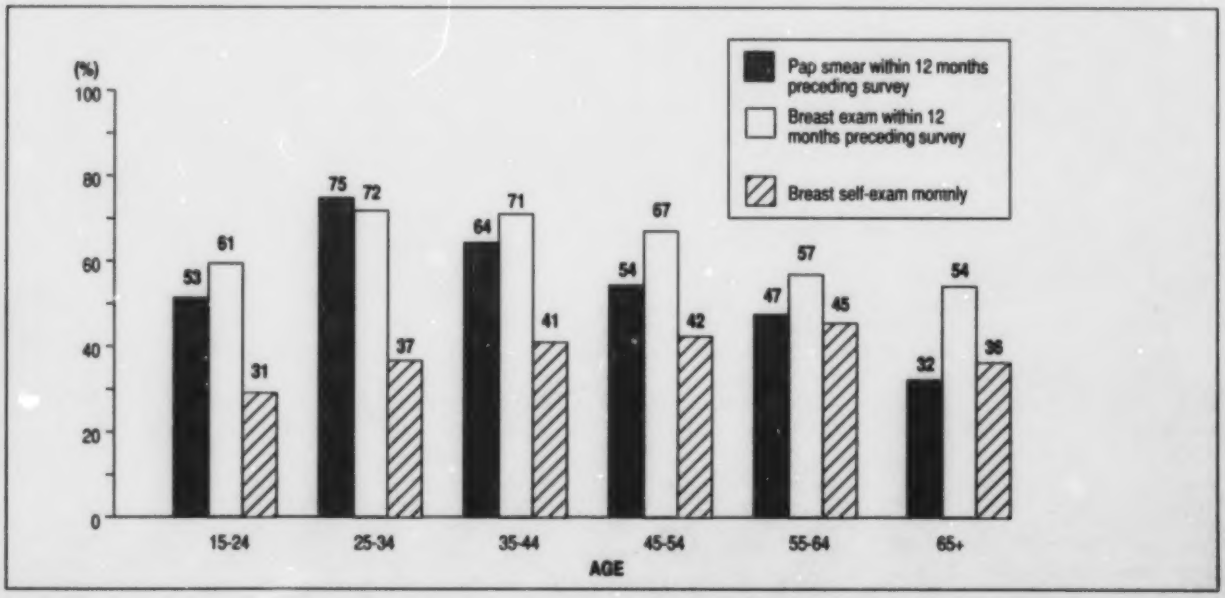
Women aged 25-44 are in their prime child-bearing years and are therefore likely to be going to their doctors for contraception advice. Doctors often take this opportunity to perform a Pap smear as women who are within this age group are those most in need of regular screening checks. One might hypothesize that younger women do not see the necessity of screening because they are not sexually active or don't see themselves as personally vulnerable for cervical cancer. It has also been reported that young women have a fear of pelvic examinations which may keep them from having a Pap smear.[8] Older women, on the other hand, may feel that Pap smears are not necessary because of their age. To clarify these assumptions one would have to ask women why they believe regular Pap smears are not important. One must also acknowledge that this practice is so closely linked to other reproductive medical practices it is difficult to sort out personal motivation from routine medical practice. When looking at how socio-economic class affects this practice, it is important to note that socio-economic status is linked to age in that the youngest and oldest women tend to have less education and lower incomes.

The prevalence of yearly Pap smears found in this survey compares favourably to that of other similar surveys[9,10] (Table A).

TABLE A: **PERCENTAGE OF WOMEN WHICH HAD A PAP SMEAR IN THE YEAR PRECEDING THE SURVEY, CANADA AND USA, 1978/79, 1985**

Canada Health Survey 1978/79	Health Promotion Survey (Canada) 1985	National Health Interview Survey (USA) 1985
42%	56%	46%

FIGURE A: **PERCENTAGE OF WOMEN WHICH HAD A PAP SMEAR OR BREAST EXAMINATION, BY AGE, AGE 15+, CANADA, 1985**



There appears to have been a significant increase in the proportion of Canadian women who report a regular Pap smear, from 42% in 1978 to 56% in 1985, a level which is 10% above that in the United States.[10] Since these three surveys had very similar question wording and sample designs, these differences are not likely due to error.

Breast examination

Examination by a doctor or nurse

Women responding to the Health Promotion Survey were asked whether they had had their breasts examined by a doctor or nurse in the year prior to the survey (Q. 61). Sixty-five percent of all women report having had their breasts examined during that period (Table 2). Women between the ages of 25 and 54 years are most likely to have their breasts examined by a health professional during a one-year period. Women with higher education and incomes are more likely to have their breasts checked; these women also tend to be older. Women who live in Quebec and Alberta report that they had their breasts checked within the year more often than does the average Canadian woman.

Breast self-examination (BSE)

Women were asked how often they examined their own breasts (Q. 63). Thirty-eight percent of women report that they examine their breasts every month. Women between 35 and 64 years of age are most likely to practice monthly breast self-examinations (Table 2). Women who are between 15 and 24 and those over 65 are least likely to examine their own breasts. Those women who are highly educated (and hence tend to be older) more frequently report performing monthly BSE.

One of the important links between positive intentions and actual behaviour is the knowledge of how to perform the behaviour. Women in this sample were asked whether they had ever been shown how to examine their own breasts (Q. 62). A large proportion of women (75%) answered affirmatively (Table 3). The youngest (15-24 years) and oldest (over 65 years) women are less likely to have been shown how to examine their own breasts. As with professional breast examination, women with higher education and income (who also tend to be older) are more likely to report that they have been taught breast self-examination.

Of those who have been shown how to examine their own breasts, only 47% actually perform BSE on a monthly basis, 22% do BSE every two to three months while 12% never do so (Table 3). No trends with regard to education or income are evident.

English-speaking women who have been shown how to examine their own breasts are more likely than French-speaking women to examine their breasts every month. It appears from these data that knowledge of how to perform the behaviour is insufficient to ensure the adoption of the desired behaviour, although there is increased practice of BSE by those who have been shown how to perform it.

In an effort to assess knowledge on this topic, women were asked, "How often do you think a woman should examine her own breasts?" (Q. 64). Two-thirds (68%) believe that women should examine their breasts every month (Table 4), yet only 38% of all women actually do so. Only 1% believe that women should never examine their breasts yet 12% of all women report that they never examine their breasts. Women who are most supportive of the belief that women should examine their breasts monthly tend to be between 35 and 54 years of age, to have higher education and income, and to be English-speaking.

Clearly, there are barriers which affect the relationship between knowledge, beliefs and actual behaviours of women with respect to the practice of breast self-examination.

Discussion

For over three decades, it has been advocated that women practice breast self-examination to detect breast cancer early. This advocacy of BSE has been predicated on two assumptions: that detection at earlier stages leads to greater survival from breast cancer, and that most breast cancer is found by women themselves who then visit physicians for diagnosis.[11] There are some data to support these assumptions but according to the World Health Organization, ". . . there is insufficient evidence that BSE as applied to date is effective in reducing mortality from breast cancer".[12] In a recent study, women who detected cancer through BSE had a five-year survival rate that was 18% higher than that of women who did not examine their breasts.[13] The Canadian Task Force on the Periodic Health Examination wonders whether the gains in survival, if established, could offset the anxiety produced in healthy women and expresses concern about the potential negative effects (e.g. unnecessary biopsy) of recommending BSE for those under 30 years of age, in whom breast cancer is exceedingly rare. Nonetheless, most physicians recommend breast self-examination as a method for early detection of suspicious lumps which may be cancerous and there is strong evidence that Canadian women have increasingly heeded this advice (Table B).

TABLE B: **PERCENTAGE OF WOMEN WHICH HAD BREAST EXAMINATION, CANADA AND USA, 1978/79, 1985**

	% Had Breasts Examined by Health Professional in Year Preceding the Survey	% Perform Breast Self-Examination Monthly
Canada Health Survey 1978/79	41	21
Health Promotion Survey (Canada), 1985	65	38
National Health Interview Survey (USA), 1985	50	32

Breast cancer is most common between the ages of 35 and 50.[4] The results from this survey and from the Canada Health Survey (1978/79) indicate that women who report examining their breasts every month are most likely to be between 35 and 64 years of age. Should clinical trials indicate the effectiveness of BSE in decreasing mortality from breast cancer, it may be worthwhile to establish age-specific guidelines for the practice of BSE which are comparable to those relating to the use of PAP smears.

Being at risk is not the same as appraising oneself at risk. The issue of breast cancer is one in which the perception of risk may be avoided and knowledge of the importance of the behaviour often does not predict behaviour.[14] A recent American study has shown that, although 94% of women are aware of BSE and its hypothesized benefits, only 40% practice it monthly.[15]

Women were asked how often BSE should be performed and even though 68% say that it should be done monthly, only 38% do so. Why is there such a discrepancy between knowledge and behaviour?

There are many psychological reasons why women may avoid performing BSE even though they believe that it is important to do so. First, there are few short-term satisfactions inherent in performing breast self-examination and success often means you have discovered disease. In a recent Gallup survey,[13] women in the United States were asked why they didn't perform monthly breast self-examination. Even though 75-90% of breast cancers are discovered by women themselves, 42% of the sample doubted their ability to detect a lump. Many women don't do BSE because their doctor performs an annual check. This is so even though women themselves have an advantage over a doctor because they are familiar with their own breast topography.[16] Breast cancer is also an emotionally-charged issue because one's breasts are closely linked to one's feelings of attractiveness and desirability, hence women may avoid performing breast self-examination because it brings these emotions to the surface.

Women in North America do not practice BSE regularly, although many have tried to and most believe that they should. Perhaps if more women knew that most cases of breast cancer need no longer be treated with radical mastectomy and that 95% of early detection is done by women, they might not avoid the practice so much or delay seeking treatment when they do find a lump. In addition to clearing up the misconceptions about treatment for breast cancer, it is important to deal with issues surrounding the teaching of breast self-examination. Women can learn how to do breast self-examination from friends, magazines, pamphlets, videotapes, doctors and special training clinics. Women learn best from one-to-one instruction but even this method is no assurance that breast self-examination will be done well.

Early observations from the Canadian National Breast Screening Study suggest that one year after one-to-one instruction, no more than 2-3% of women do what is deemed to be an "ideal examination".[15] It is clear from looking at both the practical and psychological barriers to performance of BSE that, in addition to accurate and positive factual information, emotional support is required if breast self-examination is to be optimally used by women. All teaching packages should include information designed to ensure that women feel vulnerable to the disease and that they are guardedly optimistic about its outcome if it is diagnosed early.

Implications

The practice of any preventive behaviour is very much a matter of individual choice. Many factors may affect the choice to perform breast self-examination or to have a PAP smear, among them are: one's degree of comfort with the body; feelings of self-worth; feelings of vulnerability; a past history of cancer; personal ability to cope with the information such a checkup yields; a supportive environment and degree of personal commitment to health.

Organizations responsible for promoting the use of these preventive practices must acknowledge that women, if given adequate information and a supportive environment, can make personal choices that meet their needs. Hence, it is crucial to provide adequate information for women, accounting for age, ethnicity, education and income so that they can make decisions. A supportive environment will ensure that information is available at the

appropriate level, that women can be taught to examine their own breasts, that health practitioners are available to answer questions, perform examinations and explain results so that fears and concerns are allayed. Regardless of these efforts, it is conceivable that there will always be a percentage of women who choose not to have PAP smears or examine their own breasts. Their reasons will undoubtedly be personally valid.

The data presented in this chapter are suggestive of a relationship between age, socio-economic status and performance of preventive practices. There is a significant group of women (those under 25 years, over 60 years, with low education levels and low income levels) who do not practice regular BSE or get yearly PAP smears. It is important that we use surveys such as the Health Promotion Survey to stay attuned to the characteristics of women who choose to practice preventive behaviours and those who do not. This information can be used to understand how and why personal choices are made.

Perhaps now is the time to examine the data to determine the extent to which breast self-examination and regular PAP smears can minimize the risk of cancer. As well, it is important to present this information to women in conjunction with an acknowledgement that, even though it may make sense to practice these behaviours, there are mitigating factors which can preclude their performance. The environment must allow women to feel ambivalent, unsure, and afraid without feeling guilty. If these emotions can be incorporated into promotional campaigns and teaching programs, women may find it easier to make the choice to perform BSE and to have regular PAP smears.

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TABLE 1: **SELF-REPORTED FREQUENCY OF PAP SMEARS AMONG WOMEN, BY AGE, EDUCATION, PROVINCE AND LANGUAGE, AGE 15+, CANADA, 1985**

	"When was the last time you had a PAP smear test for cancer?"				
	Population (000's)	% Within past year	% Within past 2-3 years	% More than 3 years ago	% Never
Women 15+	9,989	56.4	14.6	10.4	14.3
AGE					
15-24	2,130	53.0	5.7	1.9*	35.1
25-34	2,250	75.2	13.6	3.0*	5.1
35-44	1,760	64.0	18.0	11.3	4.4*
45-54	1,257	54.0	19.2	14.6	6.5
55-64	1,199	47.3	19.3	21.5	7.2
65+	1,392	31.6	17.2	20.6	23.2
EDUCATION					
Less than secondary	3,715	44.7	14.8	14.3	20.4
Completed secondary and some post-secondary	4,090	60.8	14.5	8.4	13.1
Degree or diploma	2,055	68.8	15.0	7.3	6.4
PROVINCE					
Newfoundland	212	50.9	11.9	14.3	18.5
P.E.I.	48	56.8	11.6	10.8	15.3
Nova Scotia	347	53.3	12.6	14.1	14.0
New Brunswick	277	49.4	13.7	11.6	18.6
Quebec	2,641	56.3	11.4	11.2	18.6
Ontario	3,634	56.7	16.3	10.2	12.9
Manitoba	418	58.3	16.9	7.6*	11.5
Saskatchewan	381	58.8	14.3	11.0*	10.6*
Alberta	873	62.2	12.5	9.0	10.7
B.C.	1,149	53.3	18.8	8.6*	12.2
Yukon	8	65.0	12.3	8.6	6.6
LANGUAGE					
English	6,621	59.0	15.4	10.4	10.8
French	2,529	54.3	11.9	11.5	19.6

* high sampling variability

TABLE 2: **FREQUENCY OF BREAST EXAMINATION BY DOCTOR/NURSE AND BY SELF, BY AGE, EDUCATION, PROVINCE AND LANGUAGE, AGE 15+, CANADA, 1985.**

		"In the past 12 months have you had your breasts examined by a doctor or a nurse?"	"How often do you examine your own breasts?"			
	Population (000's)	% Yes	% Once a month	% Once in 2-3 months	% Less often	% Never
Women 15+	9,989	64.5	37.9	18.3	17.3	23.5
AGE						
15-24	2,130	61.0	31.2	9.4	20.2	36.4
25-34	2,250	71.9	36.7	24.7	18.6	17.8
35-44	1,760	70.7	41.4	21.1	14.1	21.4
45-54	1,257	67.4	42.2	23.2	13.4	16.4
55-64	1,199	57.0	44.9	19.3	16.9	14.6
65+	1,392	54.1	35.5	12.8	18.4	30.0
EDUCATION						
Less than secondary	3,715	54.8	34.2	17.4	16.3	28.3
Completed secondary and some post-secondary	4,090	68.4	39.0	17.4	18.1	17.2
Degree or diploma	2,055	75.4	43.8	21.9	17.2	14.8
PROVINCE						
Newfoundland	212	49.8	44.4	19.1	15.0	18.0
P.E.I.	48	60.5	36.4	17.6	19.4	22.9
Nova Scotia	347	54.0	36.7	15.6	18.1	25.2
New Brunswick	277	52.0	34.9	16.3	18.4	24.9
Quebec	2,641	66.5	36.6	19.9	15.9	26.1
Ontario	3,634	65.3	38.3	16.1	17.4	25.6
Manitoba	418	66.0	41.2	20.9	17.6	16.4
Saskatchewan	381	63.2	35.6	21.5	16.9	22.5
Alberta	873	68.1	43.0	19.1	16.3	17.1
B.C.	1,149	63.7	35.1	20.2	20.4	19.1
Yukon	8	61.0	36.8	22.6	15.2	19.1
LANGUAGE						
English	6,621	65.4	40.7	18.4	17.5	20.5
French	2,529	63.5	34.4	20.1	16.3	27.6

TABLE 3: **KNOWLEDGE OF HOW TO PERFORM BREAST SELF EXAMINATION (BSE) AND THE RELATIONSHIP BETWEEN KNOWLEDGE AND ACTUAL PERFORMANCE OF BSE BY AGE, EDUCATION, PROVINCE AND LANGUAGE, AGE 15+, CANADA, 1985.**

		"Have you ever been shown how to examine your own breasts?"	Those women who have been shown to examine their own breasts: "how often do you examine your own breasts?"			
	Population (000's)	% Yes	% Once a month	% Once in 2-3 months	% Less often	% Never
Women 15+	9,989	74.5	47.2	22.0	18.4	12.4
AGE						
15-24	2,130	63.2	46.8	13.5	25.7	14.0
25-34	2,250	82.7	41.2	28.3	19.1	11.4
35-44	1,760	82.1	48.9	22.2	13.0	15.9
45-54	1,257	78.8	51.2	24.5	15.5	8.8
55-64	1,199	77.2	53.3	23.3	14.1	9.1
65+	1,392	63.0	46.6	17.6	22.1	13.8
EDUCATION						
Less than secondary	3,715	70.6	46.4	23.2	17.5	13.0
Completed secondary and some post-secondary	4,090	82.5	47.4	19.9	18.7	14.0
Degree or diploma	2,055	84.1	48.9	24.3	18.1	8.6
PROVINCE						
Newfoundland	212	65.1	57.8	20.9	14.3	7.0*
P.E.I.	48	65.9	46.5	23.2	19.3	11.0
Nova Scotia	347	67.2	48.2	19.1	21.3	11.4
New Brunswick	277	64.1	47.3	21.5	21.4	9.8*
Quebec	2,641	79.6	44.1	24.0	17.3	14.7
Ontario	3,634	72.0	49.1	18.6	18.8	13.5
Manitoba	418	76.9	47.1	25.8	17.8	9.3*
Saskatchewan	381	70.5	44.1	25.5	17.3	13.1
Alberta	373	77.1	51.5	23.0	16.5	8.9*
B.C.	1,149	76.2	44.8	25.3	20.7	8.9*
Yukon	8	74.6	47.5	26.6	15.4	10.0
LANGUAGE						
English	6,621	76.3	47.2	24.0	18.5	10.4
French	2,529	78.5	45.3	21.9	18.8	14.0

* high sampling variability

TABLE 4: **BELIEFS OF WOMEN REGARDING THE APPROPRIATE FREQUENCY OF PERFORMING BREAST SELF-EXAMINATION BY AGE, EDUCATION, PROVINCE AND LANGUAGE, AGE 15+, CANADA, 1985**

	"How often do you think a women should examine her own breasts?"				
	Population (000's)	% Once a month	% Once in 2-3 months	% Less often	% Never
Women 15+	9,989	67.8	10.7	6.1	1.3
AGE					
15-24	2,130	61.8	11.2	9.6	1.1*
25-34	2,250	70.5	13.5	7.4	–
35-44	1,760	75.0	9.0	4.2*	1.6*
45-54	1,257	76.4	6.7	2.0*	1.9*
55-64	1,199	68.3	11.4	5.0*	–
65+	1,392	55.6	10.7	5.8*	2.6*
EDUCATION					
Less than secondary	3,715	61.0	10.7	6.4	2.2*
Completed secondary and some post-secondary	4,090	70.8	11.3	7.9	–
Degree or diploma	2,055	76.0	10.4	2.2*	1.4*
PROVINCE					
Newfoundland	212	66.1	18.2	3.7*	–
P.E.I.	48	71.4	10.8	3.1*	–
Nova Scotia	347	68.2	8.4*	3.9*	–
New Brunswick	277	62.3	11.0	4.5*	–
Quebec	2,641	64.0	14.6	8.2	–
Ontario	3,634	68.4	8.8	6.8	–
Manitoba	418	74.7	9.9*	2.7*	–
Saskatchewan	381	70.8	10.6*	4.3*	–
Alberta	873	71.8	10.7	4.0	–
B.C.	1,149	69.7	7.6*	4.3*	–
Yukon	8	71.2	10.7	4.6*	–
LANGUAGE					
English	6,621	72.1	10.0	4.2	–
French	2,529	61.9	14.5	10.0	2.5

* high sampling variability
– not releasable

Section

This section considers safety and accident prevention in three different locales — on the road, at home and at work. As these locales often provide the focus for safety promotion programs, each is treated by Reg Warren in a separate chapter, while certain themes such as interprovincial and demographic differences are treated similarly throughout the three chapters.

Road safety is the topic of Chapter 8, which not only provides updates on such familiar topics as seatbelt use, but also provides important new data on drinking and driving.

Chapter 9 deals with safety at home, a topic which usually receives less attention than road and occupational safety because the extent of accidents at home is not well documented. This chapter does not provide accident statistics, but does give insights into factors which may reduce the incidence or severity of accidents at home. Knowledge of first aid and CPR is dealt with here, along with ownership of smoke detectors and other home safety equipment. The chapter also considers child health which, although broader than the topic of safety, is strongly subject to safety hazards in and around the home.

Safety at work and health promotion in the workplace are the topics of Chapter 10. An important addition to the traditional considerations in this chapter is the demand for and supply of smoke-free working environments. As is true of drinking and driving, these are the first data on this topic to emerge from a national survey.

8

Safety on the Road

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Acknowledgements: Thanks are due to the Alcohol, Drugs and Hypertension Unit of the Health Promotion Directorate.

Highlights

The majority of Canadians say that they do not drink and drive.

- Only 16% of adult Canadians said that they drove after drinking one or more times during the month prior to the survey.
- An estimated 10 million drink-driving trips occurred during the 30-day reporting period.
- Less than 3% of adult Canadians account for more than 50% of these drink-driving trips.
- The highest rates of drinking and driving are reported by the residents of Yukon Territory (22%) and Alberta (21%), while the lowest are reported in Nova Scotia and New Brunswick (12%).
- Attitudes and beliefs about alcohol and driving are strongly related to actual drinking and driving practices.
- The majority of drink-driving trips are made by people who think that they can drive safely after five drinks or more. More than any other age group, young men think that they can drink and still drive safely.
- Drinking drivers are much more likely to report regular use of marijuana and are much less likely to use seatbelts.
- Drinking drivers tend to associate with heavy drinkers and other drinking drivers, and this reinforces their view of drinking and driving as socially acceptable behaviour.

People are taking action to prevent impaired driving.

- During the year before the survey, one out of three Canadians had the opportunity to prevent impaired driving.
- Given the opportunity, three out of four Canadians intervened to prevent an impaired person from driving.
- 95% of Canadians say that they would rather pay for a taxi than have a friend drive after drinking.

Road safety is a high priority.

- 78% of Canadians feel that road safety is a very important topic for government to deal with.
- Road safety receives the highest priority rating of the 10 health topics considered.
- The desire for information on road safety and accident prevention is not high, suggesting that government should consider other methods for dealing with safety.

Adult seatbelt use has increased to 78%.

- 78% of adults report that they "always" or "almost always" wear seatbelts.
- This represents an increase of about 13% from wearing rates reported six years ago.
- The increased wearing rates are due both to seatbelt legislation and to increased voluntary use where not required by law.

84% of adults insist upon the use of carseats or restraints for children.

- 84% of adults say they always insist that children use restraint systems.
- This is due both to legislation and relatively high voluntary use.
- Adults who do not use seatbelts themselves are less likely to insist upon the use of child restraints.

Introduction

The data reported in this chapter are based primarily on two sets of questions: Q. 41-45 in the Alcohol section dealing with driving and drinking, and Q. 54 and 55 on the use of restraints, in the Safety section. Additional data are drawn from Q. 11 and 12 on information needs and Q. 79 on priorities for government action. In these latter cases, safety was only one of several topics. The wording of most of these questions is provided in the separate sections of this chapter; the complete questionnaire is in Appendix B.

The phrasing of these questions was patterned as much as possible after proven items from earlier surveys. Some questions have specific reference periods (e.g., drinking and driving in the past 30 days, being in an impaired-driving situation in the past 12 months), and these have been chosen to strike the best balance between accuracy of recall and frequency of occurrence. One consequence of this approach is that it may be difficult or impossible to generalize from a specific time period such as May 1985 to present year-round behaviour.

Some of the findings reported here logically apply only to selected populations and this is always shown in the tables. For example, the results for drinking drivers exclude those who neither drink nor drive.

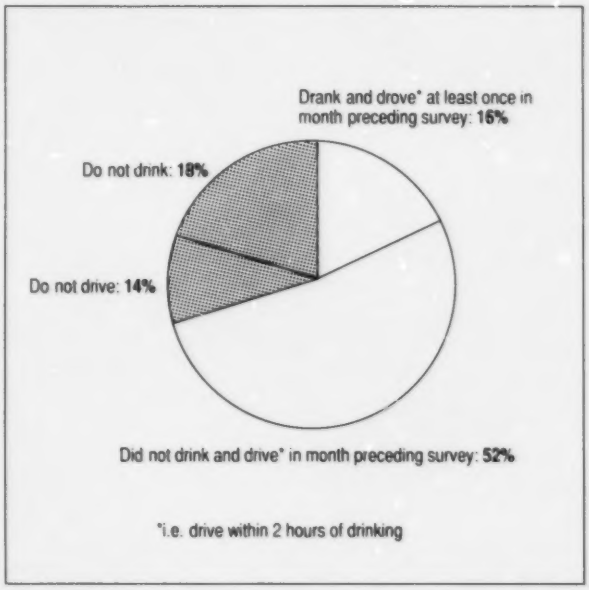
Another kind of exclusion is the "unknown" or "not stated" category. For most questions, this amounts to no more than 4% of respondents and has little bearing on the results. An exception is the question on government action where the "not stated" category is substantial for some groups. This is reported in Table 8.

The major source of bias which might affect some of the findings in this chapter is social desirability, or the natural wish of respondents to report socially acceptable behaviour. This applies to drinking-driving, seat belt use, and child restraint use, and may be especially pronounced where the behaviour under scrutiny may be illegal. While this bias may affect reported prevalence levels, it is less likely to influence the comparisons between different population groups.

One other factor to bear in mind in reading the findings is that the results are not standardized for characteristics such as age, sex and social class. Thus interprovincial comparisons do not take into account, for example, the age differences between the population of Manitoba (the oldest) and Alberta (the youngest) or income differences between residents of Ontario and Newfoundland. Age, sex and social class differences may also affect other comparisons such as the marijuana use of drinking versus non-drinking drivers. While this lack of standardization may reduce some of the inter-group differences reported in this chapter, it is unlikely to have more than a minor impact in most cases, as explained in Appendix A.

Drinking and driving

FIGURE A: **DISTRIBUTION OF POPULATION BY DRINKING AND DRIVING BEHAVIOUR IN THE MONTH PRECEDING THE SURVEY, AGE 15+, CANADA, 1985**


Drank and drove* at least once in month preceding survey: 16%
Do not drink: 18%
Do not drive: 14%
Did not drink and drive* in month preceding survey: 52%
*i.e. drive within 2 hours of drinking

The Health Promotion Survey asked, "During the past month, how many times have you driven within 2 hours after drinking any amount of alcohol?" (Q. 41). Sixteen percent of all respondents indicated that they had driven after drinking at least once in the month prior to the survey (Figure A).

In total, 18% of the people indicated that they did not drink, and an additional 14% said that they did not drive. Three out of four respondents who do drink and do drive said that they had not driven after drinking during the month prior to the survey.

Of all those who report driving after drinking in a 30-day period, 6% report doing so on only one occasion, 7% report 2-4 times and 3% drive after drinking 5 or more times (Table A).

TABLE A: **PERCENTAGE OF DRINKING-DRIVER TRIPS ACCOUNTED FOR BY VARIOUS GROUPS, AGE 15+, CANADA, 1985**

# of Drinking-Driver Trips in Month Preceding Survey	% of Population in each category	Total # of Drinking-Driver Trips (by each group)	% of All Drinking-Driver Trips (by each group)
0*	81.8	0	0
1	6.1	1,202,000	11.7
2-4	7.4	3,919,000	38.1
5+	2.6	5,159,000	50.2
Unknown	2.0	0	0

* (including non-drinkers and non-drivers)

In total, an estimated 10.3 million drink-driving trips occurred during the 30-day reporting period. Over half of all these trips are accounted for by a very small minority (3%) of Canadians who report that they drove after drinking five or more times during the month preceding the survey (Table A).

Drinking-driver characteristics

Women report driving after drinking much less frequently than do men (Tables 1, 2). Twenty-five percent of men report driving after drinking on one or more occasions compared to 8% of women, and men account for more than 80% of all drinking-driver trips.

Drinking drivers differ from the general population on a wide array of variables in addition to gender. They tend to come predominantly from the middle-aged groups; they tend to have more income and education than the norm; they are more likely to be single, separated or divorced; they drink more and have friends who drink frequently. Drinking drivers are also much less likely to use seat belts and are about twice as likely to have been with someone who had drunk too much to drive safely during the year preceding the survey. The most pronounced difference between drinking drivers and other Canadians is that the former are almost three times as likely to report using marijuana or hashish (Table 2).

Driving after drinking is reported much less frequently in eastern Canada than in western Canada (Table 3). In Atlantic Canada and Quebec, the proportion of the population reporting that they drive after drinking at least once during the month preceding the survey is consistently low – ranging from 12-13%. By contrast, 16% of Ontario residents report driving after drinking; west of Ontario, the rates are uniformly higher, reaching a maximum in Yukon Territory (22%).

Attitudes of drinking drivers

People who report driving after drinking tend to have substantially more liberal attitudes towards alcohol use and less concern for alcohol-related problems than do those who refrain from drinking and driving. They are more likely to feel that getting drunk is socially acceptable, that most drinkers do not suffer from alcohol-related problems, and that people can drink substantial amounts of alcohol without endangering their health (Table B).

TABLE B: **PERCENTAGE OF POPULATION WHICH, AT LEAST ONCE IN THE MONTH PRECEDING THE SURVEY, DROVE AFTER DRINKING, BY ATTITUDES ABOUT DRINKING, AGE 15+, CANADA, 1985**

	% Which Drove After Drinking (at least once, month preceding survey)
ATTITUDE ABOUT DRINKING	
"Most people don't mind if you get drunk occasionally"	
– among those who agree	22.0
– among those who disagree	12.7
"Most drinkers do not suffer health problems due to drinking"	
– among those who agree	22.4
– among those who disagree	14.6
"Moderate drinking can be good for your health"	
– among those who agree	20.4
– among those who disagree	13.4
"Number of drinks a person can have per week without endangering health"	
– among those who say 8 drinks	16.4
– among those who say 8 to 14 drinks	23.5
– among those who say 15 or more drinks	29.8

Beliefs about Drinking and Driving

Survey respondents who independently reported that they drank alcoholic beverages and that they drove motor vehicles were asked, "About how many drinks can you have over a three-hour period before you would worry about your ability to drive safely?" (Q. 42). There is no "correct" answer to this question, although it has been established in experimental studies that even small amounts of alcohol may impair driving-related skills.[1]

Over 25% of Canadians apparently believe that they can drive safely after four drinks or more in a three-hour period. Another 26% believe that two or three drinks is their limit. Only 8% consider that no amount of drinking is safe for them (Table 4).

Men feel that they can drink much more than women without worrying about their ability to drive safely. Nineteen percent of men as compared to only 4% of women feel that they can have five drinks or more before they worry about their ability to drive safely (Figure B).

Similarly, younger people feel that they can drink more than older people and still drive safely. To illustrate, 45% of those aged 65 and over feel that they cannot have even one drink and still drive safely; by contrast, this sentiment is held by only 19% of those aged 15-24. At the other extreme, 18% of Canadians aged 15-24 feel that they can safely have five drinks or more, as compared with only 6% of those aged 65 and over (Figure B).

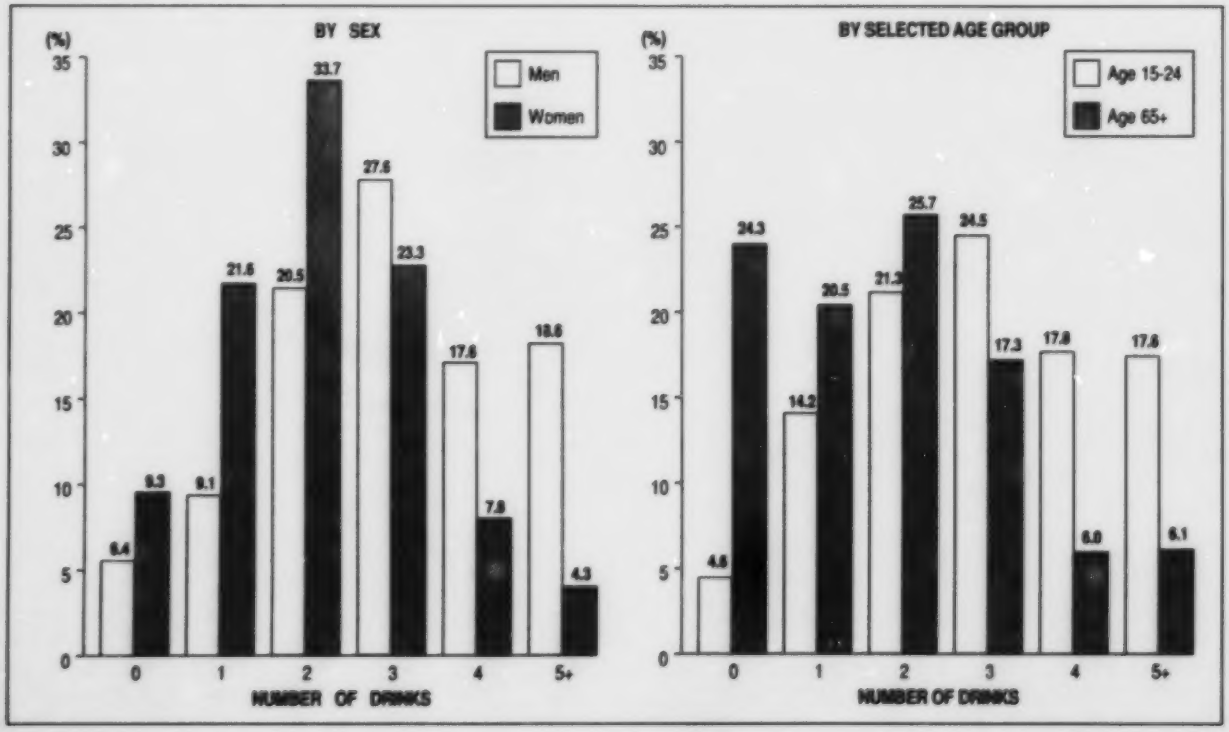
When the data are examined for age-sex groups, it can be seen that young male drivers think that they can drink more than anybody else and still drive safely. Almost one-half (49%) of this group think that they can have at least four drinks and still drive safely (Table 4).

Beliefs about how much a person can drink and still drive safely tend to vary quite substantially by province. Twenty-two percent of Manitobans feel that they can have five drinks or more before they worry about their ability to drive safely, while only 9% of adults in Prince Edward Island share this sentiment (Table 5).

Relationship of beliefs to behaviour

Beliefs about how much one can drink and still drive safely are strongly related to behaviour. Of those saying that they cannot drink any alcohol and still drive safely, only 2% drove even once after drinking in the 30-day reporting period. Of those indicating that they could have more than 5 drinks before worrying about their ability to drive safely, 55% drove after drinking at least once and 20% reported doing so five times or more in the month preceding the survey (Figure C).

FIGURE B: "HOW MANY DRINKS CAN YOU HAVE, OVER A 3 HOUR PERIOD, BEFORE YOU WORRY ABOUT YOUR ABILITY TO DRIVE?", PERCENTAGE OF POPULATION BY SELECTED AGE GROUPS AND SEX, AGE 15+, CANADA, 1985



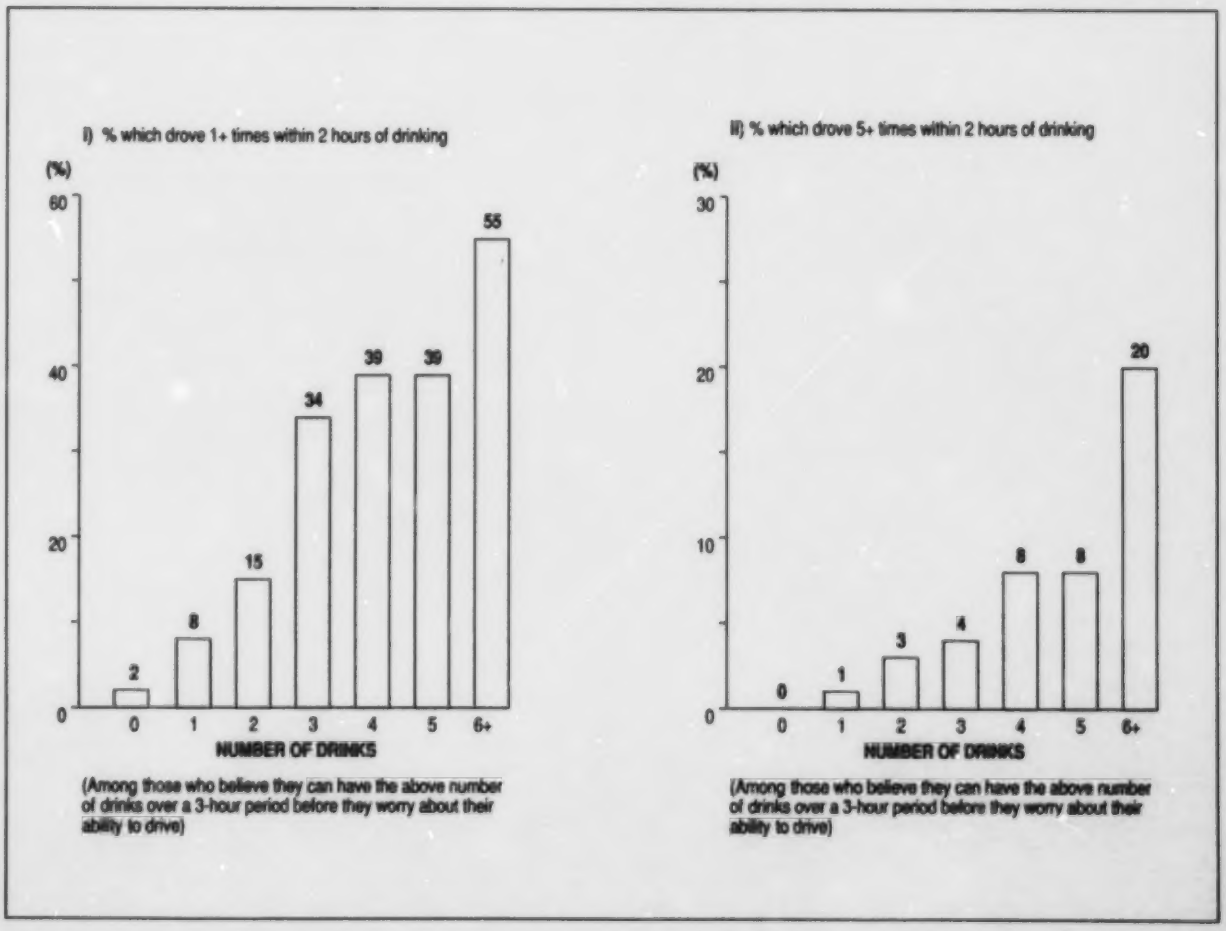
Discussion

The notion that large numbers of Canadians drive after drinking would seem to be a myth, judging by these self-reports. Eighty-four percent of Canadians say that they do not drink and drive. Even if one limits consideration only to drivers and alcohol users, 75% of Canadians say that they refrain from combining these two activities.

Moreover, more than one-half of all drinking and driving trips are made by a small minority (3%) of Canadians who drive after drinking repeatedly. These drinking drivers also exhibit other symptomatic risk-taking propensities — they are much more likely to use cannabis and are less likely to use seatbelts (Table 2). The common occurrence of these risk-taking behaviours — drinking and driving, marijuana use and non-use of seatbelts — suggests an alarming lack of concern for their personal safety as well as for the risk they pose to others.

Beliefs about how much one can drink and still drive safely are strongly related to the propensity to drink and drive. This finding is disturbing since it suggests that the people who are doing the majority of the drinking and driving are the ones who think that they can drink more than anybody else and still drive safely. Of greatest concern, however, is the observation that young male drivers think they can drink more than others and still drive safely. Unfortunately, exactly the opposite is true — drinking even small amounts of alcohol increases risks for young drivers to a much greater degree than for older drivers.[2]

FIGURE C: **PERCENTAGE OF POPULATION WHICH, IN THE MONTH PRECEDING THE SURVEY, DROVE WITHIN 2 HOURS OF DRINKING, BY BELIEFS ABOUT DRINKING AND DRIVING, AGE 15+, CANADA, 1985**



Finally, and also of considerable relevance to health promotion, the people who drink and drive repeatedly not only are heavy drinkers, they also have heavy-drinking friends. This suggests that drinking and driving may be heavily concentrated within small groups in Canadian society who engage in the behaviour repeatedly, and thus reinforce for each other the belief that this is an acceptable practice.

Some qualifications are in order concerning these findings. It must be emphasized that the information on drinking and driving is based on self-reports which may differ from actual behaviour. The results reported here suggest less drinking and driving than is typically uncovered in roadside surveys,[3] but this is not surprising. Such surveys probably overestimate the prevalence of drinking and driving because they tend to be conducted during times at which impaired driving is most likely to occur. The actual prevalence of this problem is probably somewhere between the level reported here and that found in roadside surveys. Second, the results reported here relate to drinking and driving over a specific 30-day period (May/June 1985) and cannot be easily generalized beyond this, since drinking and driving patterns are likely to vary from month to month.[4] Third, the question identified driving after any amount of alcohol consumption. It is likely that many of the drinking-driver trips were made below the level of legal impairment.

Despite these difficulties in estimating the prevalence of impaired driving or even the true extent of drinking-driving, the relationship of this practice to attitudes, beliefs and other risk-taking behaviours suggests that this issue deserves continued public concern.

Preventing impaired driving

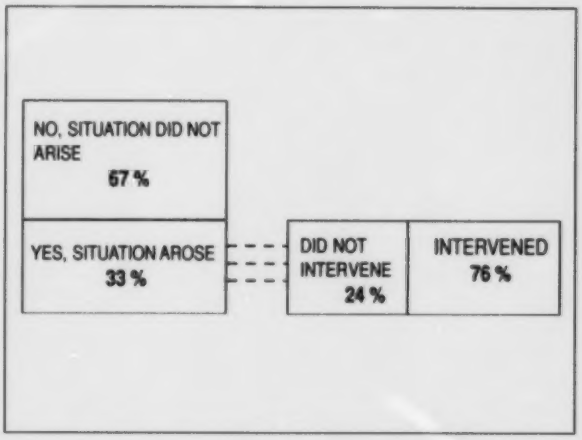
Respondents to the HPS were asked whether in the past 12 months they had been with a friend or relative whom they thought had had too much to drink to drive safely (Q. 44). Those who had been in this situation were asked whether, on the most recent occasion, they had attempted to prevent this person from driving (Q. 45).

One in three adult Canadians (33%) report that in the preceding year they had been in a potential impaired-driving situation. More than three out of four of these people attempted to prevent the person from driving (Figure D).

The need to intervene

Opportunities to intervene vary with age and sex (Table 6). Almost one out of two Canadians age 15-24 (47%) were confronted with potential impaired-driving situations over a one-year period, and the likelihood of such situations decreases with age thereafter. Fewer than one out of 10 people aged 65 and over found themselves in these circumstances. The greatest opportunity to intervene is reported by young women (49%), followed closely by young men (44%).

FIGURE D: **"IN THE PAST 12 MONTHS, HAVE YOU BEEN WITH A FRIEND OR RELATIVE YOU THOUGHT HAD TOO MUCH TO DRINK TO DRIVE SAFELY?", AND, IF SO, "ON THE MOST RECENT OCCASION DID YOU ATTEMPT TO PREVENT THAT PERSON FROM DRIVING?", AGE 15+, CANADA, 1985**



While age and sex play a role, much better predictors of opportunity to intervene are people's drinking patterns and those of their friends. For example, among those who had no drinks in the week prior to the survey, 31% had an opportunity to prevent impaired driving in the past year. By contrast, 51% of those who reported a weekly consumption of 15 drinks or more had an opportunity to prevent impaired driving (Table C). Among people who said that none of their friends drank too much, 19% had an opportunity to prevent impaired driving compared with 62% of those who indicated that most or all of their friends drank too much. Finally, among those who had not, themselves, driven after drinking during the month preceding the survey, 34% had the opportunity to prevent one impaired-driving trip from taking place, compared with 55% of those who had driven after drinking on two or more occasions.

Situations requiring intervention to prevent impaired driving vary by province. Quebeckers are the least likely (27%) to report being in an

TABLE C: **PERCENTAGE OF POPULATION WHICH, IN THE 12 MONTHS PRECEDING THE SURVEY, HAD BEEN WITH A FRIEND OR RELATIVE WHO HAD TOO MUCH TO DRINK TO DRIVE SAFELY, BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985**

IMPORTANCE OF ROAD SAFETY	
Among those who think:	
– not very important	37%
– moderately important	37%
– very important	33%
# OF DRINKS, WEEK BEFORE SURVEY	
Among those who had:	
– 0	31%
– less than 15	36%
– 15 or more	51%
# OF TIMES DRIVEN WITHIN TWO HOURS AFTER DRINKING, IN PRECEDING MONTH	
Among those who had done so:	
– 0 times	34%
– once	38%
– 2+ times	55%
# OF FRIENDS WHO DRINK TOO MUCH	
Among those with:	
– none	19%
– a few	42%
– about half	63%
– most or all	62%

impaired-driving situation during the year preceding the survey, while Yukoners are the most likely (41%) to have found themselves in such circumstances (Table 7).

Taking Action on Impaired Driving

Given the need to intervene, people report doing so with remarkable consistency. Overall, about three out of four people faced with an impaired-driving situation intervene, and there is little variation in the likelihood of intervention as a function of age and sex (Table 6). Women evidence a somewhat greater willingness to intervene than do men, and elderly people seem to be more reluctant to intervene than are younger people. Saskatchewan residents were least likely to try to prevent impaired driving (66%), in contrast to Yukoners (83%) and Quebeckers (81%), as shown in Table 7.

People choose to intervene in a wide variety of ways, the most common form of intervention being the most direct: 41% of intervenors simply drove the impaired person home. This is a useful and viable strategy provided, of course, that the intervenor has not also been drinking excessively. Other strategies were used far less often (Table D).

TABLE D: **METHODS USED IN THE 12 MONTHS PRECEDING THE SURVEY TO DEAL WITH FRIENDS OR STRANGERS WHO HAVE HAD TOO MUCH TO DRINK TO DRIVE SAFELY, AGE 15+, CANADA, 1985**

METHOD	
Drove them home yourself	41%
Asked someone to drive them home	15%
Hid their car keys	11%
Asked them to take a taxi	10%
Kept the person at your home	7%
Other	17%

Participants in the HPS were asked whether they agreed or disagreed with the following statement: "I'd rather pay for a taxi than see a friend drive after drinking" (Q. 48). Ninety-five percent of Canadians agree with this sentiment, a surprisingly high figure when one considers that this intervention strategy is not often used. Less surprising is the finding that people who disagree with the statement are less likely (55%) to intervene to prevent impaired driving than are those who agree with it (78%) (data not shown).

Discussion

In more than three out of four instances, individuals intervene in an attempt to prevent an impaired person from driving. While there may be some over-reporting on this question due to social desirability, it is imperative, nevertheless, to note the high frequency with which people claim to be taking action to prevent impaired driving. Previous research has suggested that stringent penalties alone are likely to be insufficient to produce sustained reductions in impaired driving.[5] According to these researchers, what is required are changes in social attitudes regarding impaired driving. If, as data reported here indicate, impaired driving is unacceptable to a majority of Canadians, then efforts should be made to convert this attitude into action. In particular, promoting increased personal intervention to prevent impaired driving might have beneficial, long-term effects.

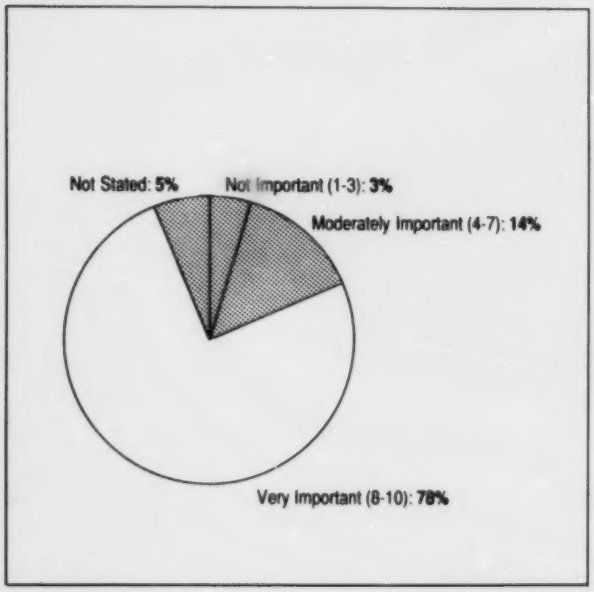
Importance of road safety

Respondents were read a list of health topics and asked to indicate on a scale of one to ten how important they felt it was for government to deal with each topic (Q. 79). Their responses were

grouped into 3 categories: "not very important" (1-3), "moderately important" (4-7), and " very important" (8-10).

As shown in Figure E, 82% rated road safety to be a very important health topic for government to deal with. In fact, road safety receives a higher rating than any other topic, suggesting that government action on road safety is a high priority for the public. (See Chapter 15, Table 6 for comparative data on other topics.)

FIGURE E: **IMPORTANCE OF ROAD SAFETY: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION ON THE ROAD?", AGE 15+, CANADA, 1985**



Population patterns

Canadians of all ages, of both sexes and from every province give high ratings to the importance of government dealing with road safety. However, younger Canadians give somewhat higher ratings than do older ones, women assign higher ratings than do men, residents of Quebec and Altantic Canada rate this item somewhat higher than Canadians living west of Quebec (Tables 8,9).

Ratings of the importance of government dealing with road safety do not vary markedly as a function of education, income, marital status or language of the respondent (data not shown).

Need for information

Respondents were asked whether there were any health topics on which they felt they needed more information. Those who indicated a need for more information (22% overall) were read a list of seven different topics including "safety and accident prevention" (Q. 11, 12). Although this is the third most frequently mentioned topic, only 9% indicated a need for information on safety (Table 10). However, this represents 42% of those wanting any information.

Women are substantially more likely than men to cite a need for more information on safety; younger Canadians tend to be more desirous of such information than are older ones. The greatest demand for information on safety emanates from Quebeckers, 15% of whom cite a desire for more information (Table E).

TABLE E: **PERCENTAGE OF POPULATION WHICH FEELS IT NEEDS MORE INFORMATION ON SAFETY AND ACCIDENT PREVENTION, BY PROVINCE, AGE 15+, 1985**

Canada	9.0%
Newfoundland	4.5%*
P.E.I.	6.2%
Nova Scotia	4.9%
New Brunswick	5.3%
Quebec	14.7%
Ontario	7.6%
Manitoba	7.6%
Saskatchewan	7.0%
Alberta	6.5%
B.C.	7.2%
Yukon	5.9%

* high sampling variability

The question did not distinguish between road safety, home safety and occupational safety, so it cannot be assumed that all of these respondents wanted information on road safety. In any event, it is indicative of a relatively low level of interest in further information.

Discussion

Canadians clearly believe that road safety is an important topic for government to deal with, yet less than 10% indicate a desire for further information on safety – a low number considering that the question did not even specify road safety. Evidently, the public must have other types of action in mind, such as legislation, mediation or advocacy. This should be a priority for research since the support for action is high, but the survey did not enquire into alternative courses of action or their acceptance by the public.

The low level of expressed need for further information on safety is not surprising, since the public is regularly exposed to reminders of the benefits of seatbelt use and the risks of drinking and driving. What these results suggest is that information on safety should be carefully aimed at those who need it. Such aimed dissemination could be highly cost-efficient, since the 9% of respondents who indicate such a need translates into an estimated 1.8 million Canadians who would like to have further information on this topic. However, it should be remembered that safety-related messages also serve to reinforce existing positive behaviour.

Seatbelt use

Respondents were asked, "How often do you use seatbelts when you ride in a car: always, most of the time, sometimes, rarely or never?" (Q. 54). Nearly 2 out of 3 (65%) Canadians say that they "always" use seatbelts, and an additional 13% indicate that they use seatbelts "most of the time". Only 13% report that they rarely or never use seat belts (Table 11).

User characteristics

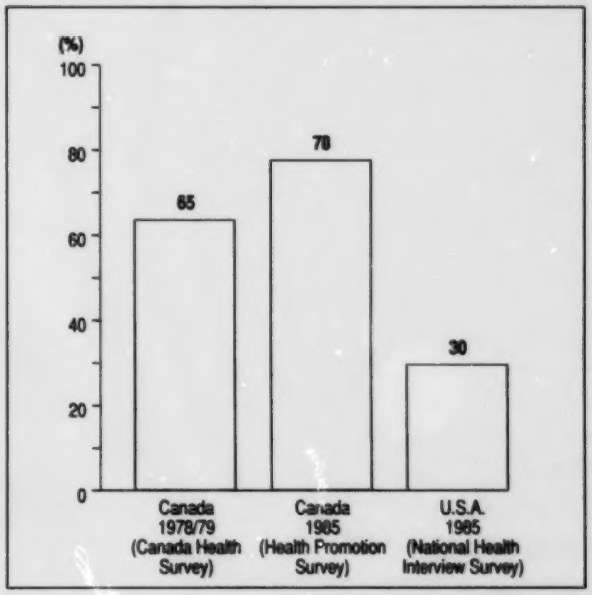
Seatbelt wearing rates vary as a function of age, sex and other demographic characteristics. Seatbelt wearing rates increase steadily with age, the lowest rates being reported by people aged 15-24 and the highest rates by those aged 65 and over. Moreover, in each age group, women report substantially higher rates of seat belt use than do men (Table 11). Overall, women are 13% more likely than men to always wear their seatbelts. Seatbelt wearing rates also tend to increase as the education, income and occupational status of potential users increases (Table 12).

Not surprisingly, seatbelt wearing rates are also related to opinions on the importance of government dealing with road safety. Among those who consider road safety to be a very important issue, 80% say that they always use seatbelts, compared to 52% who give little importance to this issue. Similarly, seatbelt usage rates vary with the amount of alcohol consumed and propensity to drive after drinking. Drinking drivers are less likely to report using their seatbelts than are non-drinking drivers (Table 12).

Discussion

The seatbelt usage rates reported in the Health Promotion Survey are some 13% higher than those reported in the Canada Health Survey conducted six years earlier,[6] and some 48% higher than those reported in a recent survey in the United States[7] (Figure F). There are several reasons for the higher rates of seatbelt use in Canada, the most important of which is seatbelt legislation. At the time of Canada's Health Promotion Survey, eight of the eleven jurisdictions had seatbelt use laws, and provinces with such laws show consistently higher rates of seatbelt use (Table 13).

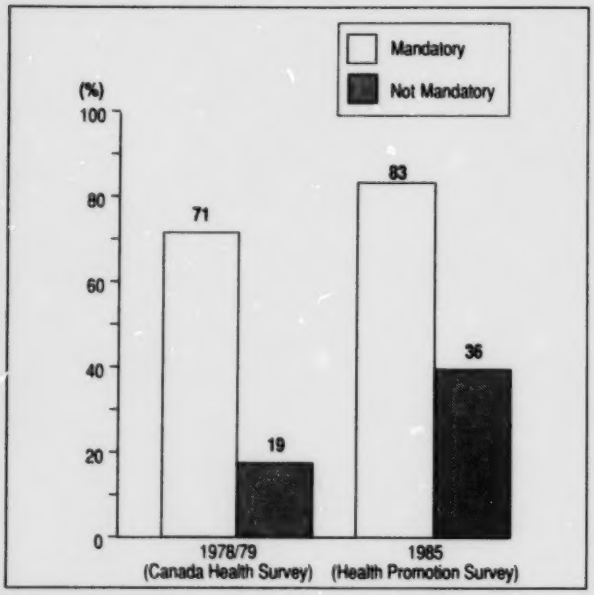
FIGURE F: **PERCENTAGE OF POPULATION WHICH USES SEATBELTS "ALWAYS" OR "MOST OF THE TIME", WHEN RIDING IN A CAR, CANADA, 1978/79, 1985 AND USA, 1985**



At the time of the HPS, all Canadian jurisdictions except Prince Edward Island, Alberta and Yukon Territory had seatbelt laws (Prince Edward Island and Alberta have since enacted such legislation). In jurisdictions with legislation, 83% of the population report that they always/almost always use seatbelts, compared to 36% in jurisdictions without legislation (Figure G).

The results of the HPS can also be compared in this manner with those of the Canada Health Survey (1978-79). In the six years that have elapsed since the Canada Health Survey, three important developments have occurred. First, the number of provinces with legislation increased from four (Ontario, Saskatchewan, British Columbia and Quebec) to eight by June 1985. In each case where legislation has been enacted, seatbelt usage rates have increased substantially. Second, seatbelt wearing rates in jurisdictions with legislation increased from 71% to 83%. Third, seatbelt wearing rates also increased from 19% to 36% in those jurisdictions that have not mandated their use.

FIGURE G: **PERCENTAGE OF POPULATION WHICH USES SEATBELTS "ALWAYS" OR "MOST OF THE TIME", BY MANDATORY/NOT MANDATORY SEATBELT REGIMES IN CORRESPONDING JURISDICTIONS, AGE 15+, CANADA, 1978/79, 1985**



Seatbelt wearing rates in Canada have increased over the past six years not only as a result of legislation but also of increases in wearing rates in both mandated and non-mandated jurisdictions. While 78% of Canadians now say that they always or almost always wear seatbelts, there is still a clear need to promote increased usage.

Of special concern should be young people aged 15-24 and, in particular, young men, who report the lowest wearing rates and who also are at the greatest risk of being involved in road accidents.[8] Moreover, the observation that people who drink and drive are less likely to use seatbelts suggests the special high risk nature of this group. They are likely to provide a particularly difficult challenge for health promotion professionals.

These results are based on self-reports of seatbelt use which may tend to overstate actual usage rates. Nevertheless, the trends reported here are consistent with the results of observational studies.[9]

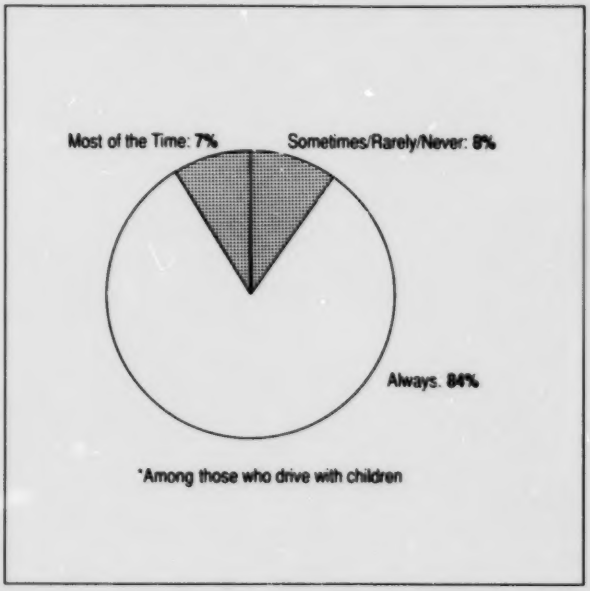
Child restraint systems

Respondents were asked "When you are driving in a car, do you insist that children with you have their seatbelts fastened or are in carseats?" (Q. 55). Responses included "always", "most of the time", "sometimes", "rarely" or "never". Those who do not drive, or do not drive with children in the car, have been excluded from the analysis.

Population Patterns

More than 8 out of 10 eligible Canadians indicate that they "always" insist that children have their seatbelts fastened, or are in carseats (Figure H). By contrast, only 8% say that they insist on using restraints less often than "most of the time". These findings are consistent across all age groups, while women are 6% more likely than men to insist on the use of child restraints (data not shown).

FIGURE H: **"WHEN YOU ARE DRIVING A CAR, DO YOU INSIST THAT THE CHILDREN WITH YOU HAVE THEIR SEATBELT FASTENED OR ARE IN CARSEATS?", AGE 15+, CANADA, 1985***



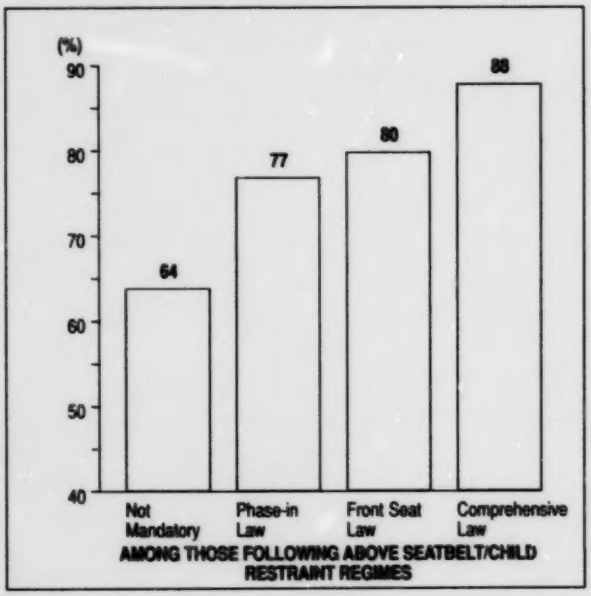
Similarly, there is relatively little difference in reported child restraint system use as a function of income or education of the respondent (data not shown). A more important characteristic is the adult's use of seatbelts: people who always use seatbelts themselves are much more likely to insist that children always use restraints (94%) than are adults who rarely or never use seatbelts (62%).

The role of legislation

One of the apparent reasons for the high reported rates of seatbelt or carseat use by children is legislation. At the time of the survey, nine of the eleven

jurisdictions had some form of legislation. Although usage rates vary from province to province (Table 14), they are consistently higher in provinces with mandatory use laws and are highest where the laws are most comprehensive (Figure I).

FIGURE I: **PERCENTAGE OF POPULATION WHICH ALWAYS INSISTS THAT CHILDREN DRIVING WITH THEM HAVE THEIR SEATBELTS FASTENED OR ARE IN CARSEATS, BY APPLICABLE LEGISLATION IN CORRESPONDING JURISDICTIONS, AGE 15+, CANADA, 1985**



The nature of the legislation governing the use of child restraint systems varies across Canada from jurisdiction to jurisdiction. At the time of the HPS, four provinces had enacted comprehensive legislation (Nova Scotia, Ontario, Saskatchewan and British Columbia), four were phasing in legislation that applied only to children born after the date of enactment of the legislation (Newfoundland, New Brunswick, Manitoba and Alberta), one (Quebec) had legislation that applied only to front seat passengers and the remaining two jurisdictions (Prince Edward Island and Yukon Territory) had no child restraint law. (Prince Edward Island has subsequently enacted such a law).

Discussion

The reported use of child restraints in Canada is already high although it may be overstated due to some "social desirability" bias in answering positively. However, use is likely to continue to increase with new legislation in Prince Edward Island and the continued phasing-in of laws in other provinces. Nevertheless, there appears to be a small group who neither use seatbelts themselves, nor insist upon the use of child restraints. This group clearly should be considered a priority for future child restraint promotion efforts. Such efforts should be co-ordinated with messages encouraging use of seatbelts by adults.

Reported use of seatbelts and child restraints is high, and increasing, but there is a need for continued promotion of restraint system use — especially in jurisdictions where use is not legislated, but also where use is mandatory. The target group is readily identifiable — young drivers and their passengers — the group most in need of the protection provided by seatbelts, but the least likely to use them.

In terms of drinking and driving, two findings are of particular significance. Firstly, the majority of Canadians report that they do not drive after drinking. A small minority of adult Canadians (less than 3%) accounts for more than one-half of drink-driving trips. Secondly, beliefs about how much one can drink and still drive safely are strongly related to whether one does, in fact, drink and drive. Of greatest concern here is the observation that young men apparently think that they can drink more than other people and still drive safely — a belief that is clearly at variance with the reality.

Finally, it is encouraging to note that people report that they are actively intervening to prevent impaired driving. This may well be indicative of an emerging social consensus regarding the unacceptability of impaired driving. If so, every effort should be made to accelerate this trend since there is a consensus among the experts that only broad-based changes in social attitudes can produce long-term, sustained reductions in impaired driving.

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TABLE 1: FREQUENCY OF DRIVING AFTER DRINKING IN THE MONTH PRECEDING THE SURVEY, BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	% 0 times	% Once	% 2-4 times	% 5 + times	Do not drink/ do not drive
Total 15+	19,611	49.3	6.1	7.4	2.6	32.5
Men	9,623	48.5	8.5	12.4	4.4	23.9
Women	9,988	50.1	3.9	2.7	1.0	40.1
AGE						
15-24	4,334	45.0	5.6	8.2	1.9*	38.1
M	2,204	44.1	7.9	12.7	1.8*	31.7
W	2,130	46.0	3.2*	3.6*	2.0*	44.6
25-34	4,476	55.6	8.0	10.6	3.4	19.7
M	2,226	47.3	10.8	17.9	6.2	14.3
W	2,250	63.8	5.3	3.4*	–	25.0
35-44	3,529	53.9	10.2	8.4	4.7	20.6
M	1,768	49.1	14.5	13.2	7.6	13.8
W	1,761	58.8	5.9	3.7*	1.7*	27.4
45-54	2,520	54.2	5.3	6.2	3.1*	29.5
M	1,263	53.4	5.3*	10.3	5.7*	23.7
W	1,257	55.1	5.3*	2.1*	–	35.4
55-64	2,306	46.8	3.3*	4.6	1.5*	41.5
M	1,108	50.4	5.8*	8.4	3.1*	29.2
W	1,198	43.6	–	–	–	52.9
65+	2,446	36.2	1.3*	2.7*	–	58.3
M	1,054	51.8	–	5.3*	–	39.0
W	1,392	24.3	–	–	–	72.9

* high sampling variability
– not releasable

TABLE 2: PERCENTAGE OF POPULATION WHICH, IN THE MONTH PRECEDING THE SURVEY, DROVE AFTER DRINKING, BY SEX, EDUCATION, MARITAL STATUS, DEMOGRAPHIC AND OTHER ATTRIBUTES, AGE 15+, CANADA, 1985

	Population (000's)	% Who Drove After Drinking (at least once, Month preceding the survey)
Total 15+	19,611	16.1
SEX		
Men	9,623	25.3
Women	9,989	7.6
EDUCATION		
Less than secondary	7,173	12.8
Some secondary	7,871	21.6
Degree or diploma	4,368	23.5
LANGUAGE		
English	13,165	18.8
French	4,928	12.5
Other	1,390	5.2*
INCOME QUINTILE		
Lowest	2,826	9.5
Second	2,437	18.0
Third	2,614	21.1
Fourth	2,179	26.3
Highest	2,513	23.8
MARITAL STATUS		
Married	12,074	15.9
Single	5,327	18.2
Divorced/Separated	1,017	20.7
Widowed	1,189	5.7*
MAIN ACTIVITY		
Working	10,414	23.9
Looking for work	976	15.7
Student	2,300	11.3
Retired	2,172	5.6
Keeping house	3,425	3.9
FREQUENCY OF DRINKING		
Never	3,552	0.0
Less than once per month	3,944	3.2
Once per month	3,568	10.5
Less than once per week	3,177	25.3
More than once per week	5,308	36.2
# OF DRINKS, WEEK PRECEDING SURVEY		
None	6,175	5.8
Less than 15	8,131	26.0
More than 15	1,656	43.7
# OF FRIENDS WHO DRINK TOO MUCH		
None	8,672	10.2
A few	8,544	21.9
About half, or more than half	1,815	18.4
BEEN WITH IMPAIRED PERSON, MONTH PRECEDING SURVEY?		
Yes	6,433	23.9
No	12,958	12.5
NEED INFORMATION ON SAFETY		
Yes	1,772	13.1
No	17,126	16.9
ALWAYS USE SEATBELTS		
Yes	12,844	13.7
No	6,767	21.1
USED MARIJUANA OR HASHISH		
Yes	1,089	41.0
No	18,405	15.5

* high sampling variability

TABLE 3: FREQUENCY OF DRIVING AFTER DRINKING IN THE MONTH PRECEDING THE SURVEY, BY PROVINCE, AGE 15+, CANADA, 1985

	Population (000's)	% 0 times+	% Once	% 2-4 times	% 5+ times	% 1 or more times
Canada	19,611	83.9	6.1	7.4	2.6	16.1
Newfoundland	423	87.6	4.6*	5.8	2.0*	12.4
P.E.I.	96	87.6	6.3	5.0	–	12.4
Nova Scotia	681	88.4	5.2	4.5*	1.9*	11.6
New Brunswick	544	88.3	4.7*	4.5*	2.5*	11.7
Quebec	5,148	87.5	4.5*	5.9	2.1*	12.5
Ontario	7,096	83.6	6.4	7.4	2.6*	16.4
Manitoba	818	78.5	9.1	9.0	3.4*	21.5
Saskatchewan	759	78.8	9.4	8.5	3.3*	21.2
Alberta	1,762	79.2	7.4	10.4	3.0	20.8
B.C.	2,267	79.6	6.9	9.7	3.8*	20.4
Yukon	17	77.9	9.6	9.0	3.5*	22.1

+ includes respondents who do not drink and respondents who do not drive.
* high sampling variability
– not releasable

TABLE 4: "HOW MANY DRINKS CAN *YOU* HAVE OVER A 3 HOUR PERIOD BEFORE *YOU* WOULD WORRY ABOUT YOUR ABILITY TO DRIVE?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Eligible+ Population (000's)	# OF DRINKS (%) 0	1	2	3	4	5+
Total 15+	10,956	7.6	14.5	26.2	25.8	13.3	12.4
Men	6,197	6.4	9.1	20.5	27.8	17.6	18.6
Women	4,759	9.3	21.6	33.7	23.3	7.8	4.3
AGE							
15-24	2,352	4.6	14.2	21.3	24.5	17.8	17.6
M	1,312	4.2*	8.3	14.0	25.1	24.3	24.3
W	1,040	5.2*	21.6	30.7	23.8	9.7	9.2
25-34	3,148	5.0	13.2	27.2	27.3	14.2	13.1
M	1,711	3.7*	8.9	18.3	30.0	18.0	21.1
W	1,437	6.4	18.4	37.9	24.0	9.7	3.7*
35-44	2,388	7.6	13.9	27.1	26.9	13.7	10.8
M	1,322	5.1*	8.0	23.1	27.8	18.2	17.7
W	1,066	10.7	21.3	32.0	34.6	8.0	2.3*
45-54	1,367	9.9	13.2	31.3	27.2	8.0	10.4
M	802	7.5*	4.2*	30.8	30.3	11.5	17.8
W	565	13.2	25.9	32.0	22.7	–	–*
55-64	1,014	8.8	18.7	26.0	26.0	11.9	8.6
M	626	8.6*	13.7	19.6	29.9	14.9	13.3
W	388	8.8*	18.7	26.0	26.0	11.9*	8.6*
65+	687	24.3	20.5	25.7	17.3	6.0*	6.1*
M	425	22.1	18.4	23.8	19.5	9.1*	7.1*
W	262	27.9	24.0	29.0	13.7*	–	–

+ excludes people who do not drink alcohol or drive a vehicle
* high sampling variability
– not releasable

TABLE 5: "HOW MANY DRINKS CAN *YOU* HAVE, OVER A 3 HOUR PERIOD BEFORE *YOU* WOULD WORRY ABOUT YOUR ABILITY TO DRIVE?", BY PROVINCE, AGE 15+, CANADA, 1985

	Eligible+ Population (000's)	# OF DRINKS (%)					
		0	1	2	3	4	5+
Canada	10,955	7.6	14.5	26.2	25.8	13.3	12.4
Newfoundland	178	10.1*	9.0*	25.3	27.0	14.6	14.0
P.E.I.	44	6.8*	11.4	31.8	25.0	15.9	9.1*
Nova Scotia	339	9.1*	16.5	31.0	23.3	9.7	10.0
New Brunswick	236	8.5*	14.0	27.1	27.1	11.0	12.7
Quebec	2,518	12.1	16.5	23.7	22.9	10.6	14.3
Ontario	4,228	7.7*	17.6	27.7	23.6	13.6	9.7
Manitoba	466	3.4*	9.4	19.1	26.6	19.5	21.9
Saskatchewan	469	2.3*	8.5*	24.0	29.0	19.0	17.1
Alberta	1,120	4.0	10.0	25.0	29.1	16.8	15.1
B.C.	1,346	4.5*	9.5	29.3	34.5	11.8	10.2
Yukon	11	9.1	9.1	18.2	27.3	18.2	18.2

+ excludes people who do not drink alcohol or drive a vehicle
* high sampling variability

TABLE 6: "IN THE PAST 12 MONTHS, HAVE YOU BEEN WITH A FRIEND OR RELATIVE WHOM YOU THOUGHT HAD TOO MUCH TO DRINK TO DRIVE SAFELY?" AND, IF SO, "ON THE MOST RECENT OCCASION DID YOU ATTEMPT TO PREVENT THIS PERSON FROM DRIVING?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	% In Such Situation	Of Those in Such Situation, % Who attempted to Prevent Friend or Relative from Driving
Total 15+	19,611	32.8	75.9
Men	9,623	34.4	72.4
Women	9,988	31.3	79.6
AGE			
15-24	4,334	46.7	76.3
M	2,204	44.4	68.1
W	2,130	49.2	84.0
25-34	4,476	42.8	75.4
M	2,226	46.0	70.8
W	2,250	39.7	80.6
35-44	3,529	34.5	78.7
M	1,768	36.5	77.9
W	1,761	32.5	79.7
45-54	2,520	26.8	79.1
M	1,263	27.2	79.4
W	1,257	26.3	78.9
55-64	2,306	16.7	71.0
M	1,108	19.2	74.4
W	1,198	14.4	66.9
65+	2,446	8.8	59.0
M	1,054	10.5	66.7
F	1,392	7.6	51.8

TABLE 7: "IN THE PAST 12 MONTHS, HAVE YOU BEEN WITH A FRIEND OR RELATIVE WHOM YOU THOUGHT HAD TOO MUCH TO DRINK TO DRIVE SAFELY?" AND, IF SO, "ON THE MOST RECENT OCCASION DID YOU ATTEMPT TO PREVENT THIS PERSON FROM DRIVING?", BY PROVINCE, AGE 15+, CANADA, 1985

	Population (000's)	% In Such Situation	Of Those in Such Situation, % Who attempted to Prevent Friend or Relative from Driving
Canada	19,611	32.8	75.9
Newfoundland	423	33.3	78.5
P.E.I.	96	34.7	70.6
Nova Scotia	68	29.0	68.3
New Brunswick	544	35.7	71.6
Quebec	5,148	26.6	80.6
Ontario	7,096	35.0	77.7
Manitoba	818	34.8	66.4
Saskatchewan	759	39.3	65.6
Alberta	1,762	36.7	76.5
B.C.	2,267	34.5	71.5
Yukon	17	41.2	83.3

TABLE 8: "HOW IMPORTANT DO YOU FEEL IT IS FOR THE GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION ON THE ROAD?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	% Not Important	% Moderately Important	% Very Important	% Not Stated
Total 15+	19,611	3.2	13.6	77.8	5.4
Men	9,623	3.9	16.8	74.3	5.0
Women	9,988	2.4	10.5	81.3	5.8
AGE					
15-24	4,334	3.1	15.0	81.0	0.9*
M	2,204	4.1	17.6	77.3	1.0*
W	2,130	2.1*	12.3	84.8	–
25-34	4,476	2.4	15.7	78.6	3.4
M	2,226	2.7*	21.3	70.7	4.1
W	2,250	2.1*	10.1	85.2	2.6*
35-44	3,529	2.7	17.0	77.4	2.9
M	1,768	4.1*	22.5	70.8	2.7*
W	1,761	1.3*	11.5	84.2	3.0*
45-54	2,520	3.5	11.2	78.5	6.9
M	1,263	3.3*	11.9	78.0	6.8
W	1,257	3.7*	10.3	79.2	6.9
55-64	2,306	5.9	10.3	76.6	7.2
M	1,108	8.2	12.5	74.5	4.8*
W	1,198	3.8*	8.3	78.4	9.5
65+	2,446	2.3*	8.3	72.1	17.3
M	1,054	2.1*	6.6*	74.3	17.0
W	1,392	2.5*	9.6	70.4	17.5
Excluding Non-Respondents					
Total 15+	18,558	3.3	14.4	82.3	–
M	9,144	4.1	17.7	78.1	–
W	9,414	2.6	11.2	86.3	–

* high sampling variability
– not releasable

TABLE 9: "HOW IMPORTANT DO YOU FEEL IT IS FOR THE GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION ON THE ROAD?", BY PROVINCE, AGE 15+, CANADA, 1985

	Population (000's)	% Not Important	% Moderately Important	% Very Important	% Not Stated
Canada	19,611	3.2	13.6	77.8	5.4
Newfoundland	423	2.1*	12.5	80.9	4.5*
P.E.I.	96	2.1*	13.5	77.1	7.3
Nova Scotia	681	2.6*	13.8	78.4	5.1
New Brunswick	544	1.3*	10.3	83.3	5.1
Quebec	5,148	4.6*	12.9	79.1	3.5*
Ontario	7,096	3.3*	11.9	76.9	8.0
Manitoba	818	1.7*	17.6	76.2	4.5*
Saskatchewan	759	2.6*	17.9	76.0	3.4*
Alberta	1,762	2.7	18.7	74.1	4.5
B.C.	2,267	1.6*	14.9	80.1	3.4*
Yukon	17	–	18.8	75.0	6.3

* high sampling variability
– not releasable

TABLE 10: PEOPLE WHO FEEL THEY NEED MORE INFORMATION ON SAFETY AND ACCIDENT PREVENTION, BY AGE AND SEX, AGE 15+, CANADA, 1985

		NEED INFORMATION ON SAFETY:	
	Population (000's)	As % of Entire Population	As % of Those Wanting Information On Any Topic
Total 15+	19,611	9.0	41.6
Men	9,623	7.2	38.8
Women	9,988	10.8	43.5
AGE			
15-24	4,333	9.6	45.7
M	2,203	7.0	40.1
W	2,130	12.3	49.9
25-34	4,476	11.7	43.3
M	2,226	9.9	43.4
W	2,250	13.4	43.2
35-44	3,529	10.7	44.8
M	1,768	8.3	38.8
W	1,761	13.0	49.7
45-54	2,520	6.9	33.9
M	1,263	5.4*	28.7
W	1,257	8.4	38.5
55-64	2,306	6.7	42.5
M	1,108	4.2*	42.8
W	1,198	9.0	42.5
65+	2,446	5.3	30.2
M	1,054	5.4*	34.8
W	1,392	5.2*	27.1

* high sampling variability

TABLE 11: "HOW OFTEN DO YOU USE SEATBELTS WHEN YOU RIDE IN A CAR?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	% Always	% Most of the Time	% Sometimes	% Rarely/ Never	% Not Stated
Total 15+	19,611	65.5	12.8	8.6	12.7	0.5
Men	9,623	58.9	15.5	9.4	15.7	0.6*
Women	9,988	71.9	10.1	7.8	9.9	0.5*
AGE						
15-24	4,334	57.0	14.8	11.9	16.2	–
M	2,204	50.4	18.0	11.5	19.9	–
W	2,130	63.9	11.4	12.4	12.3	–
25-34	4,476	63.8	14.2	9.4	11.6	–
M	2,226	55.2	18.1	10.3	15.2	–
W	2,250	72.4	10.2	8.6	8.2	–
35-44	3,529	66.3	14.1	6.8	12.7	–
M	1,768	61.9	15.3	7.7	14.8	–
W	1,761	70.7	12.9	5.8	10.6	–
45-54	2,520	66.4	11.6	9.6	12.3	–
M	1,263	58.7	13.9	10.4	16.9	–
W	1,257	74.3	9.2	8.8	7.6	–
55-64	2,306	69.6	9.8	7.6	11.9	–
M	1,108	64.4	11.3	9.1	14.1	–
W	1,198	74.5	8.5	6.3*	9.3	–
65+	2,446	77.5	8.7	3.5*	9.8	–
M	1,054	73.8	11.2	5.0*	9.6	–
W	1,392	80.4	6.8	2.3*	10.0	–

* high sampling variability
– not releasable

TABLE 12: **PROPORTION OF POPULATION WHICH ALWAYS USES A SEATBELT WHEN RIDING IN A CAR, BY DEMOGRAPHIC AND OTHER CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Population (000's)	% Which Always Uses Seatbelt
Total 15+	19,611	65.5
SEX		
Men	9,623	58.9
Women	9,989	71.9
EDUCATION		
Less than secondary	7,173	61.6
Some post-secondary	7,871	64.9
Degree or diploma	4,368	73.2
INCOME QUINTILE		
Lowest	2,826	64.4
Second	2,437	66.0
Third	2,614	63.1
Fourth	2,179	62.8
Highest	2,513	67.2
EMPLOYMENT CATEGORY		
Managerial/professional	3,209	71.3
Other white collar	3,723	64.4
Blue collar	3,367	49.6
NEED INFORMATION ON SAFETY		
Yes	1,772	66.6
No	17,126	66.2
IMPORTANCE OF ROAD SAFETY		
Not very important	621	52.1
Moderately important	2,673	56.9
Very important	15,264	80.0
# DRINKS, WEEK PRECEDING SURVEY		
None	6,175	68.1
Less than 15	8,131	64.5
More than 15	1,656	53.9
# DRINK-DRIVING TRIPS, MONTH PRECEDING SURVEY		
None	16,054	67.9
One	1,202	61.0
Two or more	1,975	52.1

TABLE 13: **FREQUENCY OF SEATBELT USE, WHEN RIDING IN A CAR, BY PROVINCE+, AGE 15+, CANADA, 1985**

	Population (000's)	% Always	% Most of the Time	% Sometimes	% Rarely/ Never
Canada	19,611	65.5	12.8	8.6	12.5
Newfoundland+	423	67.8	14.7	9.0	7.6
P.E.I.	96	22.1	11.6	19.0	47.4
Nova Scotia+	681	83.4	9.5	3.5*	3.4*
New Brunswick+	544	70.7	15.7	5.2	8.5
Quebec+	5,184	63.8	13.4	6.6	15.7
Ontario+	7,096	71.5	12.6	8.9	6.5
Manitoba+	818	64.7	16.5	7.6	10.5
Saskatchewan+	759	50.1	20.5	13.4	15.7
Alberta	1,762	25.3	10.7	19.1	44.6
B.C.+	2,267	82.3	9.4	4.4*	3.6*
Yukon	17	18.8	12.5	18.8	50.0

+ jurisdictions with mandatory seatbelt use laws as of June 1985
* high sampling variability

TABLE 14: **PERCENTAGE OF DRIVERS WHICH INSISTS THAT CHILDREN WITH THEM USE SEATBELTS OR CARSEATS, BY PROVINCE, AGE 15+, CANADA, 1985**

	Eligible+ Population (000's)	% Always	% Most of the Time	% Sometimes	% Rarely/ Never
Canada	12,236	84.4	6.5	3.4	5.3
Newfoundland++	258	84.9	8.1*	3.9*	–
P.E.I.	58	65.5	10.3	8.6	15.5
Nova Scotia++	463	95.3	3.0*	–	–
New Brunswick++	364	86.5	7.7	2.2*	3.0*
Quebec++	3,168	80.4	6.0*	3.3*	10.2
Ontario++	4,473	90.3	5.2*	2.8*	–
Manitoba++	493	84.6	8.5*	3.5*	2.8*
Saskatchewan++	492	69.7	15.9	8.5*	5.7*
Alberta++	1,039	63.0	11.7	9.1	15.7
B.C.++	1,420	92.3	4.4*	–	–
Yukon	10	60.0	10.0	10.0	20.0

+ Excludes people who do not drive, or who never drive with children in the car
++ Indicates child restraint legislation as of June 1985
* high sampling variability
– not releasable

9

Safety at Home

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Highlights

- Fewer than one out of two Canadians consider accident prevention around the home to be a very important topic for government programs.
  - Nevertheless, 84% of Canadians consider it to be of at least moderate importance and only 10% feel that it is not important.
  - Women, elderly Canadians and those from lower socio-economic status groups accord the greatest importance to accident prevention around the home.
- Child health is a top priority for government action.
  - 72% of Canadians consider child health to be very important.
  - Women attach a greater importance to this topic than do men.
- Only 34% of Canadians say that they can administer cardio-pulmonary resuscitation and only 21% have taken first aid training during the past 3 years.
  - Younger people are much more likely than older people to report CPR and first aid training.
  - Canadians from lower socio-economic groups are much less likely to have training in first aid or CPR.
  - Nevertheless, there is overwhelming support for the notion that "it is worth learning CPR even though few people have to use it".
- 93% of Canadians have at least one safety device in their home.
  - 77% have a smoke detector.
  - 72% have a first aid kit.
  - 50% have a fire extinguisher.
  - Only 35% of Canadians have all three home safety devices.
  - Low income Canadians are much less likely than others to have any of these three safety devices.

Introduction

Data on safety in the home derive primarily from Q. 56-59. Additional data on the importance of safety and child health are from Q. 79 on priorities for government action. The wording of each of these questions is provided in the separate sections of this chapter, while Appendix B contains the complete questionnaire.

The "unknown" or "not stated" category is generally excluded from the tables. For most questions, this amounts to no more than 5% of responses and has little bearing on the results. An exception is the question on government action where the "not stated" category is substantial for some groups. This is reported in Table 1.

The major source of possible error in this chapter is incomplete information. In the case of first aid and CPR training, there is no means in a survey of this type to assess actual competence. (Restricting the question about first aid training to the last three years was an attempt to minimize this problem.) Similarly, while it is possible to ascertain ownership of safety equipment, there is no good way of determining that the equipment works or that the person knows how to use it. In a recent US survey,[1] for example, only 87% of smoke detectors were considered by their owners to be in good working order.

A factor to bear in mind in reviewing the findings is that the results are not standardized for characteristics such as age, sex and social class. Thus interprovincial comparisons do not take into account, for example, differences in education level even though this variable is related to safety skills and equipment ownership. While this lack of standardization may reduce some of the inter-group differences reported in this chapter, it is unlikely to have more than a minor impact in most cases. This issue is dealt with at greater length in Appendix A.

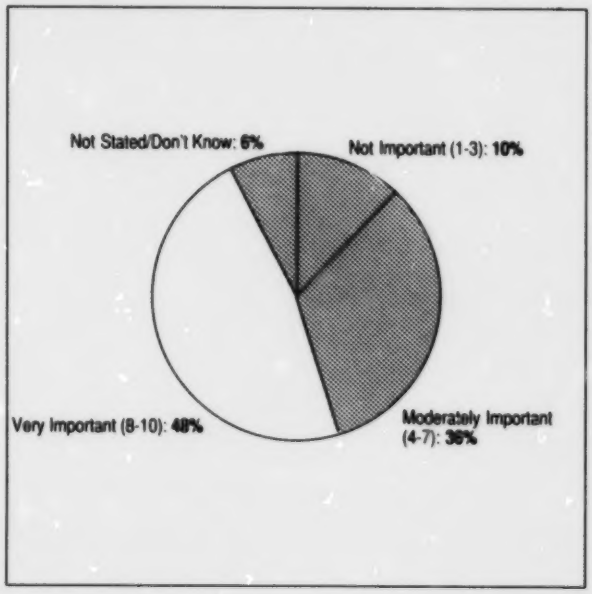
Importance of accident prevention

Canada's Health Promotion Survey asked how important it is for government programs to deal with a variety of health topics. Responses regarding accident prevention are summarized in this section. (The other issues are discussed in Chapter 15.)

Respondents were read a list of health and safety topics and asked to indicate on a scale of one to ten how important they felt it was for government to deal with each topic (Q. 79). Their responses were grouped into three categories: not very important (1-3), moderately important (4-7) and very important (8-10).

Forty-eight percent of Canadians feel that accident prevention around the home is a very important topic for government to deal with (Figure A). Of the 10 health and safety topics in the question, accident prevention in the home ranks eighth in importance.

FIGURE A: **"HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION IN THE HOME?", AGE 15+, CANADA, 1985**



Population patterns

Women tend to accord a much greater importance to accident prevention in the home than do men: 56% of women consider this topic to be very important, as compared with only 41% of men. The highest ratings are given by women age 25-34, 62% of whom consider the topic to be very important (Table 1).

French-speaking Canadians, and those with lower education or low-to-average income levels tend to give higher ratings to accident prevention in the home than do other Canadians. Relatively high ratings are also given by students and homemakers (Table A).

The highest ratings of importance for accident prevention in the home come from residents of Newfoundland, Quebec and the Maritime provinces while Canadians west of Quebec generally accord lower ratings to home safety (Table 2).

Paradoxically, support for government action on home safety is not strongly related to a person's own safety practices, whether that is knowledge of first aid, or use of safety devices such as smoke detectors, fire extinguishers and first aid kits (Data not shown).

TABLE A: **PERCENTAGE OF POPULATION WHICH RATES HOME SAFETY AND CHILD HEALTH TO BE VERY IMPORTANT, BY POPULATION CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Population (000's)	% Rating Home Safety Very Important Topic	% Rating Child Health Very Important Topic
Total 15+	19,611	48.3	72.4
INCOME QUINTILE			
Lowest	2,826	50.0	74.6
Second	2,437	50.4	76.5
Third	2,614	49.2	78.2
Fourth	2,179	41.4	74.4
Highest	2,513	46.4	73.2
EDUCATION			
Less than secondary	7,173	51.2	72.5
Completed secondary	7,871	48.5	73.4
Degree or diploma	4,368	44.3	73.3
LANGUAGE			
English	13,165	44.3	71.4
French	4,928	58.7	78.3
Other	1,390	53.7	67.2
MAIN ACTIVITY			
Working	10,414	44.6	74.5
Looking for work	976	47.8	77.4
Student	2,300	53.5	71.2
Keeping house	3,425	59.8	75.9
Retired	2,172	45.0	58.4
EMPLOYMENT CATEGORY			
Managerial/ Professional	3,209	42.3	73.1
Other white collar	3,723	47.5	76.9
Blue collar	3,367	44.1	73.4

Discussion

The observation that accident prevention around the home ranks only eighth out of ten health topics in terms of importance demands further consideration. The absence of a substantial institutionalized presence to direct public attention to the problem may cause it to be perceived as less important. Consistent with this, the lack of national monitoring systems (as exist, for example, in the occupational and road safety areas) may contribute to the lower salience of home safety as a problem for government attention.

An alternative explanation is that people may accurately perceive the magnitude of the problem, but may not feel that it is something for government to act on. Accidents around the home often connote more personal responsibility than do accidents on the road or in the workplace, where the behaviours of other individuals and the policies and practices of institutions are often implicated.

Despite the low ranking of home safety relative to other health issues, there is clear support for government activity in this area. Nearly one out of two Canadians considers the topic to be very important, while nine out of ten think that it is of at least moderate importance.

Interpretation of the age-specific trends is complicated by relatively high levels of non-response from persons aged 45 and over; in particular, 19% of people over the age of 65 were unwilling or unable to respond to this question. If, for purposes of comparability one excludes non-respondents from the calculations, it is people aged 65 and over who give the highest ratings for accident prevention around the home, with 60% of them considering this to be a very important topic.

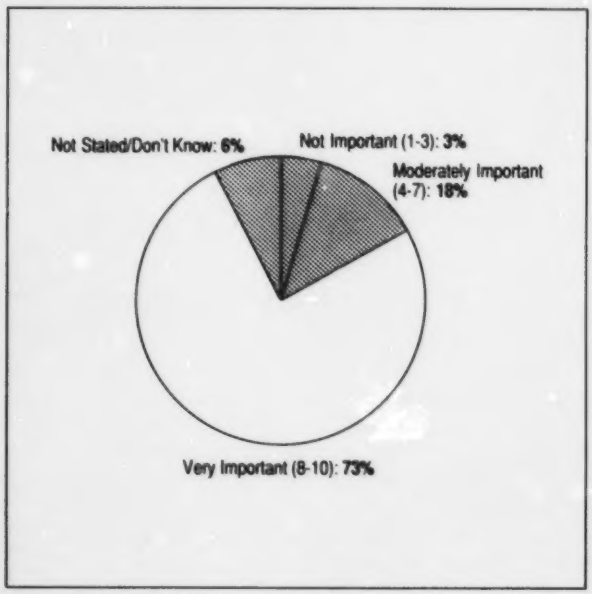
Support for government action in this area is thus strongest among members of three groups: women (especially those aged 25-34 and those from larger households), the elderly, and the disadvantaged (people from lower income and education groups). While all three groups express strong support for government action on home safety, the needs and expectations of these groups may be quite different. For example, women and members of larger households may be primarily concerned with child safety, while among the elderly, falls and many of the hazards associated with carrying out the activities of daily living may be of greater importance. By contrast, the elevated interest in home safety from members of disadvantaged groups might suggest that they may live in more hazardous surroundings as a result of their economic limitations.

Importance of child health

Respondents were asked their opinions of the importance of government dealing with child health. (Q. 79); safety and accident prevention were not specified in the question.

Almost three out of four Canadians consider child health to be a very important topic for government to deal with and only 3% feel that the topic is not very important (Figure B). Of the 10 health and safety topics considered, child health ranks third, following accident prevention on the road and drug use (Chapter 15).

FIGURE B: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH CHILD HEALTH?", AGE 15+, CANADA, 1985



Population patterns

Women attach a higher rating to the importance of child health than do men. Seventy-six percent of women compared with 69% of men consider child health to be very important for government action (Table 6, Chapter 15). The highest ratings come from Canadians age 25-44 — those most likely to be parents of young children.

Residents of Ontario give the lowest ratings to child health, with 66% considering it to be very important in contrast to 80% of Quebeckers (Table 6, ch. 15). Commensurate with this, French-speaking Canadians assign the highest ratings to this topic of any language group.

There is little variation in the importance accorded child health by people with different education levels. As well, there is little disagreement about the importance of child health with changing marital status (Data not shown).

Discussion

Support for government programs dealing with child health is strong and broadly-based, coming from virtually all sectors of society.

Evidently, the importance of child health and of governmental programs designed to enhance, maintain and protect the health of children is a subject on which the majority of Canadians are in agreement.

Safety skills and safety devices

First aid training

Respondents to the survey were asked, "In the past three years have you taken any training to administer first aid?" (Q. 56). In total, 21% indicated that they had received first aid training (Table 3).

Men (24%) are more likely than women (18%) to have had first aid training during the three years preceding the survey. Rates of first aid training are strongly age-dependent for both men and women. People aged 15-24 are the most likely to report first aid training and these rates decrease steadily with increasing age. Among those aged 65 and over, only 6% of the men and 2% of the women report first aid training during the three year period (Table 3).

Interprovincial differences in first aid training are very marked: Yukoners report the highest rates at 31%, while Quebec is the lowest at 14% (Table 4). Consistent with this, higher rates of first aid training are reported by English-speaking Canadians.

First aid training is strongly related to socio-economic status. People with higher education and income levels are much more likely to have taken training, as are homemakers (Table 5).

Cardio-pulmonary resuscitation

Respondents were asked, "Can you administer cardio-pulmonary resuscitation, sometimes called CPR?" (Q. 57). In total, 34% indicated that they knew how to administer CPR.

Men (38%) are more likely than women (29%) to report knowledge of CPR. As is the case with first aid training, reported knowledge of CPR is strongly age-dependent. The highest rates are reported by

young Canadians with 43% of men and 45% of women aged 15-24 claiming a knowledge of the skill. Reported knowledge of CPR decreases with age and the lowest rates are reported by those aged 65 and over: 27% of men and 16% of women aged 65 and over professed knowledge of CPR (Table 3).

The highest rates of knowledge are reported by Yukoners (44%), Albertans (39%) and British Columbians (39%), while the lowest rates are in Manitoba (18%) and Saskatchewan (22%) (Table 4).

Reported knowledge of CPR is associated with amount of education and level of income. Other groups above the national average are students, managers and professionals, single Canadians, and those in large households (Table 5).

Respondents were also asked whether they agreed or disagreed with the following statement: "It is worth learning CPR even though few people ever have to use it." (Q. 58). There is overwhelming support for this position: 95% of Canadians agree and only 2% disagree with the statement (data not shown).

Safety devices

Respondents were asked whether or not their homes contained a first aid kit, a smoke detector and a fire extinguisher (Q. 59). Thirty-five percent of Canadians have all three of these safety devices in their home: 36% have two items; 22% have one safety device and 7% have none.

Smoke detectors are the most widely-owned safety device, found in 77% of Canadian homes. First aid kits are second at 72%. Only 50% of homes have a fire extinguisher (Table 6).

There are substantial interprovincial differences in the ownership of first aid kits, ranging from three-quarters of homes in Quebec, British Columbia, and Yukon Territory to just over half of the residences in Prince Edward Island. The contrasts for smoke detectors and fire extinguishers are less pronounced (Table 6).

Ownership of safety devices is not strongly related to age or sex. However, people age 65 and over are the most likely to have none of the three safety devices (data not shown).

Nor is ownership strongly related to education, although Canadians with less than secondary education are the most likely to have none of the three devices. By contrast, income is strongly related to ownership. Fourteen percent of Canadians in the lowest income quintile have none of the three safety devices and only 25% have all three. Among members of the highest income group, only 2% have no safety devices in the home, while 44% have all three (Table 7).

Discussion

Thirty-four percent of Canadians claim knowledge of CPR and 21% have taken first aid training during the three years preceding the survey. Not surprisingly, these two safety skills are closely associated: 71% of those who say they are knowledgeable about CPR had first aid training during the three years prior to the survey.

Particularly impressive are the relatively high rates of first aid and CPR training among younger adults. Thirty-four percent of the population aged 15-24 indicate that they have taken recent training in first aid, while 44% are knowledgeable about CPR. These results suggest that we may be moving progressively toward a generation of Canadians who are more knowledgeable about emergency response techniques and increasingly capable of helping others.

Less positive, however, is the large number of Canadians who do not have these skills, especially within certain groups. Overall, only a minority of Canadians have these skills even though an overwhelming majority would seem to agree that CPR, at least, is worth learning. Clearly, this implies there are at least perceived barriers that prevent people from taking training even though they see it as worthwhile.

Some of these barriers are implied by the low rates of first aid and CPR training among disadvantaged Canadians. Even modest fees can constitute an important deterrent to low income Canadians as can the range of more subtle but equally important barriers such as transportation to and from classes, availability of child care or babysitting services, the availability of courses and the methods used to recruit participants.

Similarly, special educational techniques may be required to respond to the special needs, capabilities and interests of the less-educated. Related to these factors may be the low rates of training among the elderly – the group that may be most likely to need the skills.

These findings are further reinforced by the results pertaining to ownership of home safety devices. Nearly eight out of 10 Canadians are afforded the protection offered by smoke detectors; more than seven out of 10 have first aid kits in their homes; and about one out of two have fire extinguishers as well. However, Canadians from lower income groups and the elderly are the least likely to have the benefits of such protective devices.

Taken together, these findings suggest that low-income Canadians are the least likely to benefit from first aid or CPR training or to own necessary home safety devices. This must be cause for concern since low-income Canadians may have more hazardous living conditions generally.

Policy and program implications

There is only moderate support for government efforts to deal with accident prevention programs around the home and it seems plausible that even much of this support is centered around a concern for child health and safety. Nevertheless, support for home safety programs is strongest among those who may be in the best position to benefit from such programs, i.e., the elderly, the disadvantaged and women.

These sources of support are hardly surprising since the environmental conditions of the elderly and the poor may well be more hazardous for them. The higher levels of support from women may well reflect a greater concern for child safety and/or higher levels of exposure to hazards in the home.

If this is so, then the constituency for home safety initiatives becomes more clearly defined. Unfortunately, however, the means of providing equitable levels of home safety to all Canadians are not immediately clear since many of the special hazards encountered by these groups may be environmentally determined. For example, housing standards which may provide adequate levels of safety for the majority of the population may not be sufficient for high-risk groups. Exacerbating the problem is the low socio-economic status of some of these groups which clearly inhibits their ability to purchase safety devices or to live in safe environments.

By contrast, government programs to deal with child health (an issue which undoubtedly incorporates safety considerations as well) receives strong support from all segments of society — suggesting a clear mandate for global child health initiatives.

The data on CPR and first aid training suggest that progress is being made in providing such skills to young adults. However, the low overall rates of training, especially among the disadvantaged and the elderly, suggest that there is considerable room for improvement. Special efforts should be made to increase the accessibility of first aid and CPR training and to overcome the barriers encountered by excluded groups.

Finally, although a majority of Canadians have standard safety devices in their homes, low-income Canadians are by far the least likely to be afforded the protection provided by such devices.

Taken together, these findings suggest some relatively clear target groups for home safety programs — the elderly and the disadvantaged. Each of these groups lacks the necessary resources to undertake skills training and to purchase necessary safety devices. Moreover, members of these groups may be in greatest need of such programs since their environments may be more hazardous than those of other Canadians.

Clearly, increasing the accessibility of good health for these groups, by increasing the accessibility of health skills and safety devices, should be considered a priority.

References

1. **Thornberry, O.T., et al.** "Health Promotion Data for the 1990 Objectives. Estimates from the National Health Interview Survey of Health Promotion and Disease Prevention: United States, 1985." *Advance Data From Vital and Health Statistics*, 126 (September 19, 1986). Hyattsville, Md.: U.S. Department of Health and Human Services, Public Health Service (Pub. No. PHS 86-1250).

TABLE 1: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION IN THE HOME?", BY AGE AND SEX, AGE 15+, CANADA, 1985

	Population (000's)	% Not Very Important	% Moderately Important	% Very Important	% Not Stated/ Don't Know
Total 15+	19,611	9.9	35.7	48.3	6.0
Men	9,623	13.0	40.8	40.8	6.4
Women	9,988	6.9	30.9	55.6	6.7
AGE					
15-24	4,334	7.9	41.8	49.5	0.8*
M	2,204	10.9	45.5	43.1	–
W	3,130	4.9	38.0	56.1	1.0*
25-34	4,476	9.3	38.0	49.2	3.6
M	2,226	13.0	46.5	36.3	4.2
W	2,250	5.5	29.7	61.8	3.0*
35-44	3,529	9.7	39.7	47.7	2.9
M	1,768	13.0	46.9	37.3	2.9*
W	1,761	6.5	32.4	58.2	2.8*
45-54	2,520	10.5	32.3	48.4	8.8
M	1,263	13.0	33.3	44.9	8.9
W	1,257	8.0	31.3	52.0	8.8
55-64	2,306	14.7	31.3	45.5	8.6
M	1,108	20.1	35.6	38.8	5.5*
W	1,198	9.6	27.4	51.7	11.4
65+	2,446	9.8	22.9	48.3	19.1
M	1,054	10.0	23.2	49.0	17.8
W	1,392	9.6	22.5	47.9	20.0

* high sampling variability
– not releasable

TABLE 2: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION IN THE HOME?", BY PROVINCE, AGE 15+, CANADA, 1985

	Population (000's)	% Not Very Important	% Moderately Important	% Very Important	% Not Stated/ Do not Know
Canada	19,611	9.9	35.7	48.3	6.0
Newfoundland	423	6.6	26.4	62.0	5.0*
P.E.I.	96	8.3	35.1	47.4	9.3
Nova Scotia	681	9.7	33.5	52.0	4.8
New Brunswick	544	8.3	31.0	52.3	8.4
Quebec	5,148	7.3	27.9	60.9	3.9*
Ontario	7,096	10.7	38.9	42.0	8.4
Manitoba	818	12.4	40.4	40.9	6.4
Saskatchewan	759	12.5	39.1	44.3	4.1*
Alberta	1,762	11.4	41.8	42.1	4.7
B.C.	2,267	11.6	39.7	43.9	4.7*
Yukon	17	12.5	43.8	37.5	6.3

* high sampling variability

TABLE 3: **PERCENTAGE OF POPULATION WITH SELECTED SAFETY SKILLS, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	% With First Aid Training in 3 Years Preceding the Survey	% Able to Administer C.P.R.
Total 15+	19,611	20.7	33.7
Men	9,623	24.1	38.4
Women	9,988	17.5	29.1
AGE			
15-24	4,333	34.2	44.1
M	2,203	31.4	42.8
W	2,130	37.1	45.4
25-34	4,476	22.4	36.4
M	2,225	27.7	41.1
W	2,250	17.0	31.7
35-44	3,529	23.6	34.8
M	1,769	28.9	40.4
W	1,760	18.3	29.2
45-54	2,520	17.7	28.8
M	1,263	23.6	36.0
W	1,257	11.9	21.6
55-64	2,306	9.2	26.3
M	1,108	12.7	34.9
W	1,199	5.9*	18.5
65+	2,446	3.7	20.6
M	1,054	5.6*	27.0
W	1,392	2.2*	15.8

* high sampling variability

TABLE 4: **PERCENTAGE OF POPULATION WITH SELECTED SAFETY SKILLS, BY PROVINCE, AGE 15+, CANADA, 1985**

	Population (000's)	% With First Aid Training in 3 Years Preceding the Survey	% Able to Administer C.P.R.
Canada	19,611	20.7	33.7
Newfoundland	423	20.0	35.6
P.E.I.	96	26.7	34.3
Nova Scotia	681	20.0	29.4
New Brunswick	544	16.4	28.0
Quebec	5,148	14.4	33.2
Ontario	7,096	24.1	34.8
Manitoba	818	20.8	18.3
Saskatchewan	759	20.0	22.2
Alberta	1,762	22.6	39.1
B.C.	2,267	24.2	38.6
Yukon	17	30.8	44.1

TABLE 5: **PERCENTAGE OF POPULATION WITH SELECTED SAFETY SKILLS, BY POPULATION CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Population (000's)	% With First Aid Training in 3 Years Preceding the Survey	% Able to Administer C.P.R.
Total 15+	19,611	20.7	33.7
INCOME QUINTILE			
Lowest	2,826	11.6	30.7
Second	2,437	16.6	33.7
Third	2,614	22.8	35.5
Fourth	2,179	28.3	36.1
Highest	2,513	28.5	41.2
EDUCATION			
Less than secondary	7,173	15.3	27.8
Completed secondary	7,871	22.3	35.5
Degree or diploma	4,368	27.1	40.0
LANGUAGE			
English	13,165	23.8	35.5
French	4,928	14.2	32.4
Other	1,390	15.7	21.6
MAIN ACTIVITY			
Working	10,414	24.1	36.4
Looking for work	976	21.3	37.1
Student	2,300	43.3	49.1
Keeping house	3,425	59.8	22.4
Retired	2,172	2.9*	20.9
EMPLOYMENT CATEGORY			
Managerial/ Professional	3,209	30.7	43.2
Other white collar	3,723	19.8	32.9
Blue collar	3,367	22.9	33.5
HOUSEHOLD SIZE			
One	2,195	13.6	29.1
Two	5,706	15.0	29.1
Three	3,956	20.4	32.7
Four or more	7,755	27.1	38.8
MARITAL STATUS			
Married/Living together	12,074	18.2	31.9
Single	5,327	31.1	41.4
Separated/ Divorced	1,017	17.8	31.9
Widowed	1,189	2.7*	19.0

* high sampling variability

TABLE 6: PERCENTAGE OF POPULATION OWNING SELECTED HOME SAFETY DEVICES, BY PROVINCE, AGE 15+, CANADA, 1985

	Population (000's)	% First Aid Kit	% Smoke Detector	% Fire Extinguisher	% None of These	% All of These
Canada	19,611	72.4	77.0	49.6	7.1	35.3
Newfoundland	423	65.8	83.1	51.2	8.8	37.4
P.E.I.	96	53.7	83.6	60.0	7.3	35.6
Nova Scotia	681	61.1	77.7	50.1	8.9	31.8
New Brunswick	544	60.9	82.0	49.4	6.8	30.3
Quebec	5,148	75.7	74.6	51.4	7.0	36.3
Ontario	7,096	73.1	77.0	45.8	7.5	34.4
Manitoba	818	66.7	80.8	53.9	7.3	35.7
Saskatchewan	759	65.3	78.0	56.6	7.4	36.7
Alberta	1,762	71.9	81.8	54.4	5.0	39.0
B.C.	2,267	75.4	73.7	48.5	6.7	33.9
Yukon	17	75.1	74.7	65.1	6.5	45.9

TABLE 7: **PERCENTAGE OF POPULATION OWNING FIRE EXTINGUISHERS, SMOKE DETECTORS AND FIRST AID KITS, BY POPULATION CHARACTERISTICS, AGE 15+, CANADA, 1985**

	Population (000's)	% None	% All Three
INCOME QUINTILE			
Lowest	2,826	13.8	24.6
Second	2,437	8.6	32.9
Third	2,614	3.9	35.2
Fourth	2,179	4.0	44.2
Highest	2,513	2.2*	44.1
EDUCATION			
Less than secondary	7,173	8.0	34.8
Secondary	7,871	4.8	35.2
Degree or diploma	4,368	5.5	36.6
LANGUAGE			
English	13,165	6.6	35.7
French	4,928	6.5	35.5
Other	1,390	14.3	30.1
EMPLOYMENT CATEGORY			
Managerial/Professional	3,209	6.5	38.3
Other white collar	3,723	4.2	34.3
Blue collar	3,367	8.4	39.1
MARITAL STATUS			
Married/Living together	12,074	4.8	39.9
Single	5,327	9.9	29.4
Separated/Divorced	1,017	15.1	27.0
Widowed	1,189	10.9	21.9
"I MAKE MORE OF AN EFFORT TO IMPROVE MY HEALTH"			
Among Those Who Agree	7,132	7.0	37.2
Among Those Who Disagree	3,359	6.9	31.6
"DO YOU SMOKE CIGARETTES?"			
Among Those Who Say Yes	3,871	7.3	31.5
Among Those Who Say No	7,293	7.0	37.3
"HAVE YOU TAKEN FIRST AID TRAINING IN THE PAST 3 YEARS?"			
Among Those Who Say Yes	2,257	4.0	43.1
Among Those Who Say No	8,892	8.5	31.3

* high sampling variability

10

Safety and Health Promotion at Work

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Highlights

- 60% of Canadians feel that accident prevention on the job is a very important topic for government to deal with.
  - People of lower socio-economic status give higher ratings to this topic.
  - Canadians working in wholesale trade, durable manufacturing and construction attach the greatest importance to accident prevention efforts.
- 39% of Canadian workers are not aware of any accident prevention programs in their place of work.
  - Women, youth and the working poor are the least likely to be aware of accident prevention programs.
  - People working in small businesses (less than 10 employees), as well as those working in public administration, agriculture, finance and real estate report low levels of awareness.
- More than 2 out of 3 Canadian workers feel that their place of work is an appropriate place to promote good health.
  - Greatest support for health promotion in the workplace comes from employees of large organizations, in particular those in business, durable manufacturing and community services.
  - Lowest support comes from people employed in small organizations and those working in retail trade, construction and public administration.
  - The working poor, those with limited education, and non-English and non-French speakers are least likely to consider health promotion at work to be appropriate.
- 41% of working Canadians are aware of health promotion programs in their place of work.
  - Highest levels of awareness are reported by managers and professionals, while the working poor report the lowest levels of awareness of such programs.
- Nearly one out of two Canadian workers has received information about health through their workplace.
  - Managers and professionals are most likely to have received such information, while the working poor are least likely.
- More than 3 out of 4 of the people who receive information about health through their workplace consider it to be useful.
- Smoking is becoming a workplace issue and the demand for smoke-free work areas is high.
  - A large majority of smokers (83%) and non-smokers (78%) agree that non-smokers should be provided with smoke-free work areas.
  - Nearly two out of three Canadian workers experience unpleasant effects from the cigarette smoke of others.
- The supply of smoke-free workplaces is clearly sub-optimal.
  - Only 7% of Canadians work in environments where smoking is restricted completely.
  - One out of two Canadian employees work in environments where there are no restrictions on smoking.
  - Complete or partial restriction of smoking is most common in the manufacturing sector and the business sector, but least common for workers in construction, the primary sector and public administration.

Introduction

Data on safety and health at work come mainly from Q. 98-103; these questions were only asked of survey respondents who reported in Q. 90 that they were "mainly working at a job or business during the last 12 months". Data on the importance of safety at work, from Q. 79 on priorities for government action, was asked of everyone in the survey, but is usually reported here for working persons only (e.g., Table 1). Appendix B contains the complete questionnaire, showing the exact wording of each of these questions.

The "unknown" or "not stated" category is excluded from these tables. For most questions, this amounts to no more than 5% of respondents and has little bearing on the results.

The major source of possible error in this chapter is incomplete information. There is no reliable means in a household survey to assess the actual status of worksite programs. Thus the reported awareness of safety programs and of health promotion at work in Tables 2-6 is difficult to interpret: a low level of awareness may be due either to ignorance or to a lack of programs.

A factor to bear in mind in reviewing the findings is that the results are not standardized for characteristics such as age, sex, and socio-economic status. Thus inter-industry comparisons do not take into account, for example, the differences in education level between workers in construction and public administration, although education is related to awareness of and attitudes toward health promotion and safety at work. While this lack of standardization may reduce some of the inter-group differences reported in this chapter, it is unlikely to have more than a minor impact in most cases. This topic is dealt with at greater length in Appendix A.

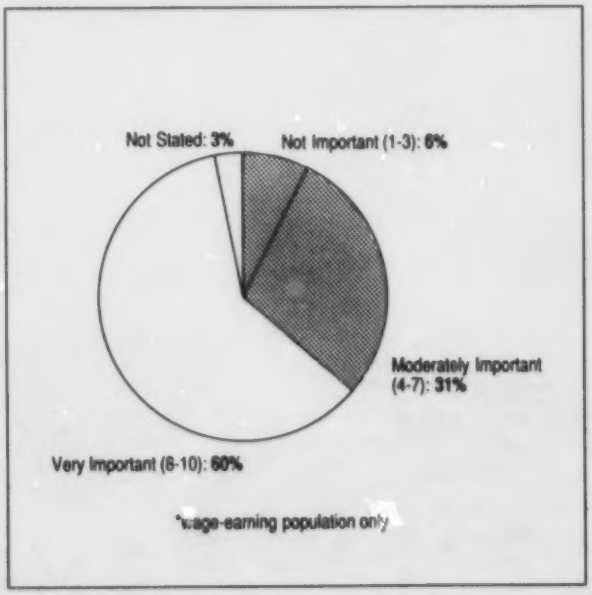
Accident prevention in the workplace

Accidents in the workplace cost millions of dollars annually to Canadian industry; they also place a substantial burden upon Canada's health care system.[1] Although substantial efforts have been devoted to accident prevention in the workplace by governments, non-profit organizations, and employers and employees' organizations, it is still a problem of considerable and enduring importance. This section examines two issues germane to accident prevention in the workplace: support for government action on occupational safety and current levels of employee awareness of accident prevention programs.

All respondents, whether wage earners or not, were read a list of health and safety topics and asked to indicate on a scale of one to 10 how important they felt it was for government to deal with each topic (Q. 79). Their responses were grouped into 3 categories: not very important (1-3), moderately important (4-7) and very important (8-10).

Sixty percent of adult Canadians consider accident prevention at work to be a very important topic for government to deal with. Only 6% consider it to be not very important (Figure A). Wage earners do not attach a substantially greater salience to this issue than do non-wage earners. When responses are restricted to members of the working population only, 60% feel that the topic is very important and 6% feel that it is not very important (Table 1). Of the 10 health and safety topics, accident prevention at work ranks fifth in importance (Table 6, Chapter 15).

FIGURE A: **"HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION AT WORK?", AGE 15+, CANADA, 1985***



Population patterns

Women accord a somewhat greater importance than men to government action on accident prevention in the workplace. Canadians from Quebec eastward typically assign higher importance ratings than do residents of Ontario and further west. The highest ratings are from New Brunswick, Quebec and Newfoundland (67-68% very important) while the lowest are from British Columbia, Saskatchewan and Alberta (53-55% very important) (Table 6, Chapter 15).

Ratings of the importance of government dealing with accident prevention at work also vary with language, education and income levels. Those whose language is not English, who have lower incomes and education levels all assign higher ratings to this topic (Table A).

TABLE A: "HOW IMPORTANT IS IT FOR THE GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION AT WORK?", BY SOCIAL AND ECONOMIC CHARACTERISTICS, AGE 15+, CANADA, 1985

	% Rating Accident Prevention To Be A Very Important Topic
LANGUAGE	
English	59.1
French	66.4
Other	61.5
EDUCATION	
Less than secondary	64.0
Secondary	61.7
Degree or diploma	54.9
INCOME QUINTILE	
Lowest	63.5
Second	66.4
Third	63.7
Fourth	54.7
Highest	57.7
MAIN ACTIVITY	
Working	44.6
Looking for work	47.8
Student	53.5
Keeping house	59.8
Retired	45.0
EMPLOYMENT CATEGORY	
Manager/Professional	56.0
Other white collar	60.8
Blue collar	64.0

Blue collar workers are also more likely to consider accident prevention to be very important (64%) than are managers and professionals (56%) or other white collar workers (61%).

Industry and size of organization

Ratings of the importance of government dealing with accident prevention on the job do not vary markedly as a function of size of company, but do vary appreciably with industry. The lowest ratings of importance come from wage earners in the agricultural, finance, real estate and retail trade industries, whereas the highest ratings are from wage earners in wholesale trade, durable manufacturing and construction. (Table B).

TABLE B: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION AT WORK?", BY SIZE OF ORGANIZATION AND BY INDUSTRY/ SECTOR, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	% Rating Accident Prevention To Be A Very Important Topic
Total wage-earners 15+	60.0
SIZE OF ORGANIZATION	
Less than 10 employees	59.3
10-49	60.3
50-100	63.0
More than 100	60.2
INDUSTRY/SECTOR	
Wholesale trade	65.2
Durable manufacturing	65.0
Construction	63.2
Business and misc. services	62.0
Non-durable manufacturing	61.8
Primary (excl. agriculture)	61.5
Transportation/ communication/utilities	61.1
Public administration	60.0
Community services	58.4
Retail trade	54.8
Finance/real estate/insurance	47.3
Agriculture	47.2

Discussion

Although accident prevention in the workplace ranks only fifth in importance out of 10 health topics, its perceived importance is quite high. Nine out of 10 consider the topic to be of at least moderate importance. This area offers excellent opportunities for continued improvement through intersectoral co-ordination and co-operation since a great many safety organizations are involved in this field in governmental, non-profit and private sector capacities.

Non-English speaking Canadians and those from lower socio-economic status groups tend to accord a somewhat greater importance to accident prevention in the workplace, and this observation has two important implications. First, it may be that Canadians from these groups tend to be employed in more hazardous occupational environments. In this regard, occupational hazards may constitute an important barrier to health for members of lower socio-economic status groups and, necessarily, they should be considered a priority group from the perspective of public health promotion efforts.

Second, as a result of their occupational characteristics and their socio-economic attributes, it may be difficult to reduce the risks of these groups using standard informational/educational approaches.

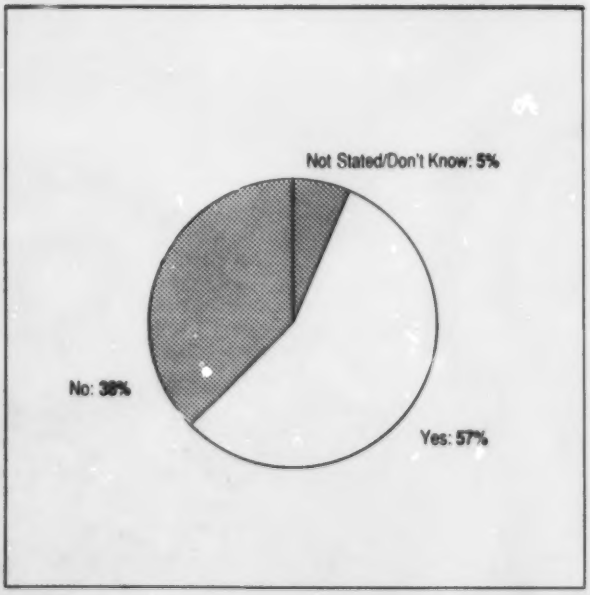
Instead, what is likely to be required is a series of carefully planned environmental modifications accompanied by innovative educational programs (e.g., mutual aid) that are sensitive to the circumstances of these groups.

The identification of high-risk occupational groups is not inherently difficult — indeed, members of these groups appear to be aware of their elevated risks and supportive of actions designed to reduce these risks. Much more difficult, however, is the challenge to design programs that can effectively reduce these risks — and this is likely to require a concerted, co-ordinated and long-term commitment by government, the private sector and voluntary organizations.

Awareness of accident prevention programs

Wage earners were also asked, "Are you aware of any safety or accident prevention programs at your place of work?" (Q 98). More than one out of two (57%) responded that they were aware of such programs (Figure B).

FIGURE B: "ARE YOU AWARE OF ANY SAFETY OR ACCIDENT PREVENTION PROGRAMS AT YOUR PLACE OF WORK?", AGE 15+, CANADA, 1985



Population patterns

Men are substantially more likely (62%) than women (51%) to indicate an awareness of accident prevention programs in their workplace; this gender difference is true at every age. In general, older wage earners are more likely to be aware of such programs than are younger ones; the highest rates are reported by wage earners aged 55 and older (65%) and the lowest awareness is reported by those aged 15-24 (48%)(Table 2).

Awareness of workplace accident prevention programs does not vary substantially with language or level of education (data not shown). However, awareness of accident prevention programs is strongly related to income, occupation, and province of residence (Table 3). Awareness is lowest in Nova Scotia, Saskatchewan and Yukon Territory; in the lowest income group; and among non-professional white collar workers.

Industry and size of organization

There are marked variations in awareness of accident prevention programs related to industry and size of business (Table C). People working in the primary sector (excluding agriculture), manufacturing, business and community services report levels of awareness of accident prevention programs in the range of 70-80%. Less than one-half of the workers in each of the remaining industries are aware of accident prevention programs; the lowest rates are reported by workers in the public administration, agriculture, finance and real estate industries.

Awareness of accident prevention is strongly related to company size as well. Seventy-two percent of people employed in large businesses (100+ workers) are aware of accident prevention programs, compared with only 28% in companies that employ 10 or fewer workers.

Discussion

Only 57% of Canadian wage earners are aware of accident prevention programs in their places of work. While it is impossible to distinguish here between lack of awareness and lack of programs there is little difference from the worker's perspective, at least for programs which require active worker participation.

The low rates of awareness reported by young wage earners and by women must also be viewed with concern. Due to their relative inexperience, younger wage earners have the greatest need for education and training in accident prevention. Similarly, the low rates of awareness reported by women coupled with the rapid entry of women into the labour force over the past decade suggest that safety programs may be slow in responding to the occupational

hazards faced by women or in accommodating the special needs of women. The relatively high proportions of women in clerical and sales jobs mitigates this somewhat.

TABLE C: "ARE YOU AWARE OF ANY SAFETY OR ACCIDENT PREVENTION PROGRAMS AT WORK?", BY SIZE OF ORGANIZATION AND BY INDUSTRY/ SECTOR, AGE 15+, CANADA, 1985

	% Yes (Aware of such programs)
SIZE OF ORGANIZATION	
Less than 10 employees	28.3
10-49	50.5
50-100	47.1
More than 100	72.3
INDUSTRY/SECTOR	
Primary (excluding agriculture)	78.5
Non-durable manufacturing	78.1
Durable manufacturing	77.0
Business and misc. services	71.5
Community services	70.0
Construction	49.1
Transportation/communication/ utilities	44.1
Retail trade	41.9
Wholesale trade	37.8
Finance/insurance/real estate	33.4
Agriculture	32.9
Public administration	28.1

Finally, the substantial variation in awareness of accident prevention programs by industry and size of organization suggests some clear priority targets for improvement of the health of Canadian workers through the implementation of occupational safety programs. Again, substantial inter-sectoral co-operation is essential if meaningful progress is to be achieved.

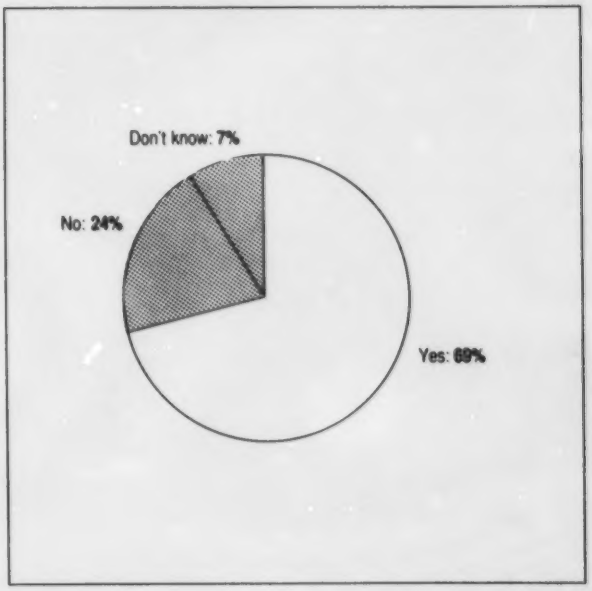
Health promotion in the workplace

An emerging area of health promotion concerns health programs, policies and activities in the place of work. Employers and/or employee groups can create an environment conducive to health by undertaking health promotion activities in the workplace and by adopting organizational policies that contribute to the good health of employees. This section examines three aspects of health promotion in Canadian workplaces: support for workplace-based health promotion, awareness of current health promotion programs and activities in Canadian workplaces, and the existence of policies conducive to health, in this instance, smoking policies.

Appropriateness of health promotion at work

Respondents were asked, "Do you think your place of work is an appropriate place to promote good health habits?" (Q. 103). Sixty-nine percent of working Canadians agree that it is and only 24% feel that it is not. (Figure C).

FIGURE C: "DO YOU THINK YOUR PLACE OF WORK IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS?", AGE 15+, CANADA, 1985



Population patterns

There is little variation in responses to these questions for wage earners of different ages or sex. However, women and those from older age groups are somewhat more likely to agree that their place of work is an appropriate venue for health promotion programs (Table 4). Similarly, there is only limited variation from province to province, although Quebeckers are the most likely and Newfoundlanders the least likely to agree (Table 5).

The perceived appropriateness of health promotion through the workplace varies for persons of differing education and income levels. Those with household incomes in the bottom 20% and Canadians with high school education or less are the least likely to feel that their workplace is an appropriate environment (Table 6). Canadians whose primary language is neither English nor French are also less likely to consider their workplace an appropriate venue for health promotion activities.

Seventy-five percent of managers and professionals feel that their work place is an appropriate place to promote good health, as compared with 67% among other white collar workers and 65% among blue collar workers.

Industry and size of organization

The greatest support for workplace health promotion programs comes from workers in business (90%), followed by those in durable manufacturing (76%) , and in community services (71%). Working Canadians least likely to endorse the appropriateness of their workplace for health promotion activities are those employed in retail trade (50%), construction (54%) and public administration (60%).

Company size is also related to the perceived appropriateness of health promotion programs with the greatest support coming from those employed in larger businesses (74%) and the lowest support (60%) from employees in companies of 10 or fewer people (Table D).

TABLE D: "DO YOU THINK YOUR PLACE OF WORK IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS?", BY SIZE OF ORGANIZATION AND BY INDUSTRY/SECTOR, AGE 15+, CANADA, 1985

	% Yes (Appropriate place)
SIZE OF ORGANIZATION	
Less than 10 employees	60.1
10-49	64.7
50-100	62.4
More than 100	74.4
INDUSTRY/SECTOR	
Business and misc. services	90.3
Durable manufacturing	76.1
Community services	71.3
Transportation/communication/ utilities	69.9
Agriculture	69.7
Primary (excl. agriculture)	69.3
Wholesale trade	66 7
Non-durable manufacturing	64.2
Finance/insurance/real estate	62.1
Public administration	59.6
Construction	54.4
Retail trade	49.9

Discussion

The level of support for workplace-based health promotion initiatives is high — more than two out of three Canadian wage earners feel that their place of work is an appropriate venue for health promotion activities. While this finding should be particularly encouraging for public health officials, enthusiasm should be constrained for several reasons.

First, several "high-risk" groups — in particular, the working poor, those with lesser education and those whose primary language is neither English nor French — do not consider their workplaces to be appropriate locales for health promotion efforts. This is the classic dilemma for health promotion — the people most in need are the ones who are often hardest to reach. Accordingly, in capitalizing upon the apparent enthusiasm for workplace-based health promotion programming, considerable care should be taken to ensure that these efforts do not simply increase existing disparities. Rather, in designing workplace health programs, the working poor should be considered as a priority target group and exceptional efforts should be made to extend access to such programs to these groups.

Secondly, certain industries are seen by their employees as less appropriate sites for health promotion. Again this suggests that certain environments may indeed be less conducive to health promotion efforts and/or that certain types of industries may confront substantial barriers to offering health promotion programs to their employees. For example, support for health promotion activities is lowest among organizations with 10 or fewer employees. This is hardly surprising. Few small businesses can afford the "luxury" of a full- or part-time program co-ordinator. In such instances, more imaginative approaches must be devised that help to overcome these barriers, for example, "consortium" style approaches wherein small employers pool their resources in order to offer greater access to programs for their employees.

In sum, the substantial support for health promotion initiatives in the workplace must be viewed not only as a tremendous opportunity but also as an imposing challenge: an opportunity to extend health promotion programming to increasingly larger segments of the Canadian population, combined with the challenge to ensure that existing inequities in access to health promotion are reduced rather than exacerbated.

Awareness of health promotion programs at work

Respondents were asked whether they were "aware of any programs (in their workplace) to improve health, physical fitness or nutrition" (Q. 99). Forty-one percent indicated that they were aware of health promotion programs in their workplaces.

Population patterns

There is little variation in awareness of workplace health promotion programs by age and sex, although younger people (age 15-24) are least likely to be aware of such programs (Table 4). Awareness of workplace health promotion programs varies by

province of residence, with the highest rates being reported in Yukon Territory (51%) and the lowest in Saskatchewan (31%) (Table 5).

Awareness of workplace health promotion programs varies markedly with education and income. Canadians in the highest income quintile report the highest levels of awareness while those with post-secondary degrees/diplomas report rates that are substantially higher than working Canadians with lower levels of education (Table 6).

People whose primary language is English are the most likely to be aware of such programs (44%) followed by French-speakers (35%). Managers and professionals report much higher levels of awareness of workplace-based health promotion programs (55%) than do other white collar (33%) or blue collar workers (35%) (Table 6).

Industry and size of organization

Awareness of workplace health promotion programs varies substantially by industry and size of organization. The highest rates are reported by people in business (71%), community services (53%) and non-durable manufacturing (53%).

People employed by larger businesses (over 100 employees) are substantially more likely to report awareness of health promotion programs (52%) than people working in smaller business environments. Only 22% of employees working in businesses of 10 people or fewer are aware of such programs (Table E).

Discussion

The level of health promotion programming in Canadian workplaces is apparently high, since 41% of Canadian workers are aware of such activities. Presumably, other workers are unaware of health promotion programs which are offered. Of course, many of these may be sporadic initiatives rather than full-fledged programs. Yet, the data point to the willingness of many Canadian employers to offer health promotion activities to their employees.

The fact that employees are aware of these programs does not guarantee that they participate in them. Nevertheless, availability of programs is a necessary first step and further progress can conceivably be achieved by offering wider arrays of programs that cater to the real and perceived needs and priorities of employees.

Yet, access to health promotion, at least to the extent that it is measured by awareness of programs, is by no means equitably distributed. Rather, higher level employees appear to have substantially greater access to such programs than do others. The working poor, the poorly educated, and persons whose primary language is other than English report lower levels of awareness.

TABLE E: **"ARE YOU AWARE OF ANY PROGRAMS AT YOUR PLACE OF WORK TO PROMOTE HEALTH, PHYSICAL FITNESS OR GOOD NUTRITION?", BY SIZE OF ORGANIZATION AND BY INDUSTRY/ SECTOR, AGE 15+, CANADA, 1985**

	% Yes (Aware of such programs)
SIZE OF ORGANIZATION	
Less than 10 employees	21.7
10-49	28.9
50-100	30.1
More than 100	52.0
INDUSTRY/SECTOR	
Business and misc. services	71.4
Non-durable manufacturing	53.4
Community services	53.2
Primary (excl. agriculture)	50.3
Durable manufacturing	42.7
Transportation/communications/ utilities	34.4
Finance/insurance/real estate	32.4
Construction	25.8
Public administration	24.2
Retail trade	21.4
Agriculture	19.5
Wholesale trade	18.3

Similarly there are enormous variations in awareness of, and by extension, access to health promotion programming as a function of industry size and business. Taken together, these results suggest that there may be significant disparities and inequities in access to workplace-based health promotion programming.

For health promotion professionals, these results underscore the need to proceed slowly, carefully and thoughtfully in the design of workplace-based health promotion initiatives. First, care should be taken to avoid redundancy or unnecessary duplication of effort in health promotion programming. Resources for health promotion are extremely scarce and care must be taken to ensure that new programs supplement and extend rather than duplicate existing efforts. Second, the results speak to the necessity of carefully designing programs to extend access to health promotion to lower-level employees, in particular, the working poor. And finally, these data underscore the existence of substantial inequities in access to health promotion, and to the implicit institutional, organizational, personal and social barriers that must be overcome if access to health promotion and, by extension, access to

health itself, is to be provided equally to all working Canadians. Further analysis should give greater insight into the correlates of these inequities.

Awareness of health information at work

Respondents were asked whether they had seen or received any information about health topics at their place of work in the year preceding the survey (e.g., posters, bulletin boards, pamphlets, etc.) (Q. 100). Forty-seven percent of Canadians wage earners indicate that they have been exposed to such information through their place of work.

Population patterns

There is little variation in awareness of health promotion information activities by age and sex, although younger Canadians (age 15-24) report lower levels of awareness (Table 7).

The highest rates are reported in British Columbia (51%), Yukon Territory (50%) and Manitoba (50%), while the lowest rates are in Newfoundland (33%) (Table 8). English-speakers indicate the highest levels of awareness (49%) followed by French-speakers (43%) (Table 9).

Awareness of health promotion information varies directly with income. Sixty-three percent of Canadians from the highest income quintile report awareness of health information, as compared to 21% of those from the lowest income group. Those with university degrees are only slightly more likely to be aware of such information (56%) than those who have attained a secondary education or less (53%). Managers and professionals are more likely to be exposed to health promotion information (61%) than are other white collar (37%) or blue collar workers (45%) (Table 9).

Industry and size of organization

The highest rates of exposure to health information are reported by working Canadians in business (80%) and community services (63%). The lowest rates are reported in retail trade (20%) and public administration (23%) (Table F).

Sixty-one percent of employees in companies of 100 or more people receive health information through their workplace, as compared to 24% of those in a workplace with 10 employees or fewer (Table 10).

Discussion

Nearly one out of two employees has received information about health promotion at work; this provides a strong indication of the extent of health promotion programming in Canadian workplaces. Yet, once again, substantial inequities are apparent in terms of access to such information. Low income Canadians, those with less education, employees whose primary language was neither English nor French and employees who are at lower echelons in the organizational hierarchy are less likely to receive such information. Similarly, gross variations in access to health information are apparent as a function of industry and size of organization.

TABLE F: **"IN THE PAST YEAR, HAVE YOU SEEN OR RECEIVED ANY INFORMATION+ ABOUT HEALTH TOPICS AT YOUR PLACE OF WORK?", BY SIZE OF ORGANIZATION AND BY INDUSTRY/SECTOR, AGE 15+, CANADA, 1985**

	% Yes (Have seen or received information)
SIZE OF ORGANIZATION	
Less than 10 employees	24.3
10-49	30.0
50-100	43.9
More than 100	60.5
INDUSTRY/SECTOR	
Business and misc. services	79.6
Community services	63.4
Durable manufacturing	56.7
Primary (excl. agriculture)	54.4
Non-durable manufacturing	47.7
Finance/insurance/real estate	36.1
Transportation/communications/ utilities	33.0
Agriculture	28.4
Construction	26.5
Wholesale trade	26.0
Public administration	22.9
Retail trade	20.2

+ e.g., posters, bulletin boards, pamphlets

These results confirm the patterns reported in previous sections of this chapter: health promotion programs are available to a great many Canadian wage earners through their places of work, but access to these programs is by no means equitably distributed. Rather, higher-level employees have much greater access than do lower-level employees, particularly the working poor. Similarly, certain industries lag far behind others in providing access to workplace-based health information.

Value of information

Respondents who had been exposed to health information through their place of work (Q. 100) were also asked whether they had found the information to be helpful (Q. 101). Seventy-eight percent answered affirmatively.

Population patterns

There is little variation by age and sex in the perceived utility of information. Women are somewhat more likely (81%) than men (76%) to consider the information to be useful, but there is little variation with age. (Table 7). French-speakers are more likely (89%) to find the information helpful than are English-speakers (75%) (Table 9).

The perceived utility of health promotion information does not vary markedly with socio-economic status; irrespective of income, education or occupational category, at least 75% of workers consider the information to be helpful (Table 9).

Discussion

Employees express a strong responsiveness to information they receive about health at work. This finding suggests that the greatest obstacle to providing health promotion through the workplace is likely to be encountered in gaining access to the workplace itself, since the receptivity of employees is high.

Smoking in the workplace

A relatively new occupational health issue concerns "smoke-free" workplaces. This issue is of considerable interest since it is relevant to both workplace safety and health promotion.

Demand for smoke-free work space

Sixty-three percent of Canadian wage earners do not smoke (Chapter 3). An overwhelming majority of wage earners (80%) including a majority of both smokers (83%) and non-smokers (78%) agree that "non-smokers should be provided with a smoke-free area where they work." (Q. 31). Fifteen percent disagree with this statement, while 5% have no opinion (data not shown).

Approximately two out of three Canadian workers (66%) indicate that they "feel unpleasant effects from the cigarette smoke of others", and 40% have asked someone not to smoke (Q. 33, 34), including 11% who have asked someone not to smoke around them at work.

On the other hand, 48% of employed Canadian smokers have been asked by someone to refrain from smoking, including 14% who have been asked to refrain from smoking at work. (data not shown in this chapter).

Supply of smoke-free work space

One out of two Canadians work in environments where there are no restrictions on smoking. While 41% work in an environment where smoking is restricted "in certain places", only 7% work in environments where smoking is restricted completely. (Table 10).

Restrictions on smoking in the workplace vary by province, industry and size of business. British Columbia (10%), Alberta (10%) and Quebec (9%) have the largest proportion of their labour force working in completely smoke-free environments; the lowest proportions are reported in Newfoundland and Prince Edward Island (Table 10).

Complete or partial restriction of smoking is most common in the non-durable manufacturing industry (78%), and business (78%), and is least common for construction workers (19%). Larger employers are more likely to have complete or partial restrictions on smoking in the workplace than are small business employers: 57% of employees in companies of 100 or more employees work in environments where smoking is restricted completely or partially. Nevertheless, large employers are the least likely to restrict completely smoking in the workplace. Only 5% of workers in large businesses work in completely smoke-free environments. (Table 11).

Discussion

The demand for smoke-free work areas is remarkably high and this reflects strong support from smokers as well as from non-smokers. Nevertheless, the supply of smoke-free workplaces remains suboptimal; only 7% of Canadians work in environments where smoking is restricted completely.

Another 41% of adult Canadians work in environments which place some restrictions on smoking. However, the extent of such restrictions may vary enormously and may not meet workers' demands for clean air.

Once again, inter-sectoral co-ordination and co-operation is indicated since a great many organizations beyond the employer and employee groups directly involved have a stake in this issue. Again, progress may be slow, resistance may be encountered, but the prospects for improvement are enormous.

Policy and research implications

Only a brief, overview examination of workplace-based accident prevention and health promotion activities was possible in this survey; however, a number of recurrent themes can be identified, and each of these has important implications for health promotion program planning and for future research.

1. Support for government action on occupational safety is high, especially among employees whose working environments are most hazardous: the working poor, and those in the construction and manufacturing industries.
2. Thirty-nine percent of Canadian wage earners are not aware of any accident prevention programs in their place of work. Levels of awareness are lowest among women, youth and the working poor, suggesting that traditional accident prevention programs may be slow in accommodating the special needs of these groups.
3. Support for workplace-based health promotion efforts is high overall but considerably lower among employees of small organizations and the working poor — suggesting that there may be substantial barriers impeding the delivery of health promotion programs to these groups.
4. The level of workplace-based health promotion programming is remarkably high, especially for upper level employees and members of large organizations. It is much lower, however, for the working poor and for members of small organizations. Again, implied here is the necessity for health promotion programs that extend workplace-based efforts to disadvantaged groups and for innovative programs that overcome institutional barriers to the implementation of new programs in small business and in specific economic sectors.
5. Taken together, the results suggest differential access to health promotion for specific employee groups. In particular, the working poor — the very ones who are most in need of such programs — are the ones who are least likely to have such access.
6. The results further suggest that resistance to health promotion is likely to be greatest among small businesses and within specific sectors, in particular, wholesale trade, retail trade, public administration and construction.
7. The results may also shed some light on the relationship between socio-economic status and health. The working poor are employed in more hazardous occupations and yet are less likely to be aware of or exposed to accident prevention programs. They are less likely to perceive their workplace as an appropriate venue for health promotion, less likely to be exposed to health programs and less likely to receive information about health through their place of work. Thus, the Canadian workplace may have a major bearing on the health of employees and the effect may be one of exacerbating social inequalities in health.
8. Demand for smoke-free work areas is extremely high, but the supply is low. Necessarily, pockets of resistance can be expected but are likely to diminish in the face of a co-ordinated, intersectoral effort to supply smoke-free workplaces.

References

1. **Health and Welfare Canada**. *Occupational Health in Canada: Current Status*. Ottawa: June 1977.

TABLE 1: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH ACCIDENT PREVENTION AT WORK?", BY AGE AND SEX, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Not Very Important	% Moderately Important	% Very Important	% Not Stated
Total Wage-Earners 15+	10,414	6.0	31.1	60.0	2.8
Men	6,402	6.9	32.6	57.5	3.0
Women	4,012	4.6	28.7	64.1	2.6
AGE					
15-24	1,685	3.0*	34.3	62.4	–
M	924	3.2*	31.7	64.8	–
W	761	2.9*	37.4	59.5	–
25-34	3,109	5.0	37.1	54.6	3.3
M	1,945	5.8	41.5	48.4	4.4
W	1,164	3.8*	29.8	65.0	–
35-44	2,601	8.0	32.6	58.2	1.2*
M	1,582	8.3	35.1	54.9	1.7*
W	1,018	7.6	28.8	63.3	–
45-54	1,807	5.9	23.1	65.0	6.2
M	1,089	6.6*	23.5	64.2	5.8*
W	717	4.8*	22.4	66.1	6.7*
55-64	1,029	10.1	21.7	64.3	3.9*
M	711	13.7	23.0	62.2	–
W	318	–	18.6*	69.2	10.0*
65+	184	–	11.9*	82.7	–
M	151	–	–	85.8	–
W	33	–	–	68.2	–

* high sampling variability
– not releasable

TABLE 2: "ARE YOU AWARE OF ANY ACCIDENT PREVENTION PROGRAMS AT YOUR PLACE OF WORK?", BY AGE AND SEX, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Yes	% No
Total Wage-Earners 15+	10,414	56.7	38.0
Men	6,402	61.5	34.9
Women	4,012	50.9	44.1
AGE			
15-24	1,685	47.9	49.3
M	924	53.3	44.8
W	761	41.3	54.8
25-34	3,109	57.9	38.4
M	1,945	59.6	37.1
W	1,164	55.1	40.5
35-44	2,601	58.7	37.6
M	1,582	62.9	34.0
W	1,018	52.1	43.2
45-54	1,807	58.9	35.7
M	1,089	64.4	29.3
W	717	50.5	45.6
55+	1,213	64.9	29.6
M	862	68.4	28.4
W	351	55.8	32.8

TABLE 3: "ARE YOU AWARE OF ANY SAFETY OR ACCIDENT PREVENTION PROGRAMS AT YOUR PLACE OF WORK?", BY SELECTED ATTRIBUTES, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	% Yes
Total Wage-Earners 15+	57.5
INCOME QUINTILE	
Lowest	37.9
Second	56.3
Third	64.9
Fourth	67.7
Highest	62.1
EMPLOYMENT CATEGORY	
Managerial/Professional	62.0
Other white collar	46.5
Blue collar	66.1

JURISDICTION	Wage-Earning Population (000's)	% Yes
Canada	10.414	57.5
Newfoundland	183	54.0
P.E.I.	45	52.3
Nova Scotia	338	49.6
New Brunswick	266	54.6
Quebec	2.695	58.1
Ontario	3.983	60.2
Manitoba	419	52.9
Saskatchewan	416	50.6
Alberta	983	53.8
B.C.	1.075	57.5
Yukon	11	50.7

TABLE 4: "DO YOU THINK YOUR PLACE OF WORK IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS?", AND "ARE YOU AWARE OF ANY PROGRAMS AT YOUR PLACE OF WORK TO IMPROVE HEALTH, PHYSICAL FITNESS OR GOOD NUTRITION?", BY AGE AND SEX, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Agree Activities are Appropriate	% Aware of Activities
Total Wage-Earners 15+	10.414	68.7	40.5
Men	6.402	67.4	40.6
Women	4.012	70.9	40.4
AGE			
15-24	1.685	64.2	34.7
M	924	60.6	36.9
W	761	68.5	32.1
25-34	3.109	67.5	42.9
M	1.945	63.7	41.8
W	1.164	74.0	44.8
35-44	2.601	68.8	43.5
M	1.582	68.1	43.6
W	1.018	69.9	43.2
45-54	1.807	73.0	37.2
M	1.089	74.6	35.1
W	717	70.6	40.4
55+	1.213	71.6	41.1
M	862	72.6	43.3
W	351	69.2	35.9

TABLE 5: "DO YOU THINK YOUR PLACE OF WORK IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS?", AND "ARE YOU AWARE OF ANY PROGRAMS AT YOUR PLACE OF WORK TO IMPROVE HEALTH, PHYSICAL FITNESS OR GOOD NUTRITION?", BY PROVINCE, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Agree Activities are Appropriate	% Aware of Activities
Canada	10,414	68.7	40.5
Newfoundland	183	59.5	37.0
P.E.I.	45	68.3	42.8
Nova Scotia	338	70.5	46.9
New Brunswick	266	60.5	40.4
Quebec	2,695	74.7	33.9
Ontario	3,983	66.7	43.1
Manitoba	419	71.0	41.4
Saskatchewan	416	71.2	31.3
Alberta	983	63.2	41.2
B.C.	1,075	67.7	48.5
Yukon	11	69.4	51.2

TABLE 6: "DO YOU THINK YOUR PLACE OF WORK IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS?", AND "ARE YOU AWARE OF ANY PROGRAMS AT YOUR PLACE OF WORK TO IMPROVE HEALTH, PHYSICAL FITNESS OR GOOD NUTRITION?", BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	% Agree Activities Are Appropriate	% Aware of Activities
Total Wage-Earners 15+	68.7	40.5
LANGUAGE		
English	69.0	43.7
French	71.7	34.8
Other	54.5	30.0
EMPLOYMENT CATEGORY		
Managerial/Professional	74.9	55.2
Other white collar	67.3	33.4
Blue collar	65.0	34.8
INCOME QUINTILE		
Lowest	65.1	26.0
Second	68.4	33.6
Third	71.3	43.7
Fourth	74.4	47.9
Highest	73.1	56.6
EDUCATION		
Less than secondary	65.3	35.2
Secondary	65.7	39.2
Degree or Diploma	76.9	51.6

TABLE 7: "IN THE PAST YEAR, HAVE YOU SEEN OR RECEIVED ANY INFORMATION* ABOUT HEALTH TOPICS AT YOUR PLACE OF WORK?" AND, IF SO, "DID YOU FIND THE INFORMATION HELPFUL?", BY AGE AND SEX, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Yes (Received Information)	% Yes (Information Helpful)
Total Wage-Earners 15+	10,414	46.7	78.1
Men	6,402	47.4	76.2
Women	4,012	45.7	81.2
AGE			
15-24	1,685	32.2	80.0
M	924	34.7	80.4
W	761	29.2	79.0
25-34	3,109	50.5	76.4
M	1,945	47.4	73.1
W	1,164	55.7	80.8
35-44	2,601	49.9	78.2
M	1,582	50.3	75.4
W	1,019	49.3	82.7
45-54	1,807	48.7	79.9
M	1,089	52.2	76.5
W	718	43.5	86.0
55+	1,213	47.5	78.4
M	862	49.7	80.9
W	351	42.5	72.3

+ e.g., posters, bulletin boards, pamphlets

TABLE 8: "IN THE PAST YEAR, HAVE YOU SEEN OR RECEIVED ANY INFORMATION* ABOUT HEALTH TOPICS AT YOUR PLACE OF WORK?" AND, IF SO, "DID YOU FIND THE INFORMATION HELPFUL?", BY PROVINCE, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Population (000's)	% Yes (Received Information)	% Yes (Information Helpful)
Canada	10,414	46.7	78.1
Newfoundland	183	32.8	88.5
P.E.I.	45	43.2	76.1
Nova Scotia	338	42.6	82.1
New Brunswick	266	41.1	82.0
Quebec	2,695	44.8	88.6
Ontario	3,983	49.0	71.5
Manitoba	419	50.0	75.8
Saskatchewan	416	43.0	79.1
Alberta	983	44.2	77.6
B.C.	1,075	50.9	77.0
Yukon	11	49.9	80.0

+ e.g., posters, bulletin boards, pamphlets

TABLE 9: "IN THE PAST YEAR, HAVE YOU SEEN OR RECEIVED ANY INFORMATION* ABOUT HEALTH TOPICS AT YOUR PLACE OF WORK?" AND, IF SO, "DID YOU FIND THE INFORMATION HELPFUL?", BY SOCIAL AND ECONOMIC CHARACTERISTICS, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	% Yes (Received Information)	% Yes (Information Helpful)
Total Wage-Earners 15+	46.7	78.1
INCOME QUINTILE		
Lowest	20.9	76.6
Second	41.8	81.3
Third	56.4	79.3
Fourth	56.3	78.7
Highest	62.7	79.8
EDUCATION		
Less than secondary	53.0	77.0
Secondary	48.9	79.3
Degree or diploma	56.2	79.4
LANGUAGE		
English	48.9	74.7
French	43.4	88.6
Other	37.9	78.9
EMPLOYMENT CATEGORY		
Managerial/professional	60.6	82.3
Other white collar	36.7	75.3
Blue collar	45.3	76.4

* e.g., poster, bulletin boards, pamphlets

TABLE 10: "IS SMOKING RESTRICTED IN YOUR PLACE OF WORK?", BY PROVINCE, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

		Smoking Restricted?		
	Population (000's)	% Completely	% In Certain Areas	% Not At All
Canada	10,414	7.1	40.6	50.1
Newfoundland	183	–	41.8	50.5
P.E.I.	45	3.9*	35.7	57.6
Nova Scotia	338	5.2*	41.7	51.4
New Brunswick	266	6.2*	40.2	48.1
Quebec	2,695	8.7*	33.4	56.5
Ontario	3,983	5.1*	44.5	47.4
Manitoba	419	6.7*	49.7	42.6
Saskatchewan	416	6.1*	38.9	52.4
Alberta	983	9.6	39.3	50.3
B.C.	1,075	10.0*	42.5	45.8
Yukon	11	6.2*	29.7	60.6

* high sampling variability
– not releasable

TABLE 11: "IS SMOKING RESTRICTED IN YOUR PLACE OF WORK?", BY INDUSTRY/SECTOR AND SIZE OF ORGANIZATION, AGE 15+, CANADA, 1985 (WAGE-EARNING POPULATION ONLY)

	Smoking Restricted?		
	% Completely	% In Certain Areas	% Not At All
Total Wage-Earners 15+	7.1*	40.6	50.1
SIZE OF ORGANIZATION			
Less than 10 employees	10.9	16.1	67.8
10-49	8.1*	33.1	57.6
50-100	13.3	36.2	48.6
More than 100	4.6*	52.8	42.1
INDUSTRY/SECTOR			
Construction	5.6*	12.9	80.6
Primary (excl. agriculture)	–	29.2	65.8
Agriculture	7.4*	20.0	65.0
Finance/insurance/real estate	5.3*	29.0	64.4
Public administration	8.0*	22.6	63.5
Community services	4.2*	33.6	61.6
Transportation/communication/utilities	8.7*	33.1	57.0
Retail trade	8.3*	40.3	51.1
Durable manufacturing	7.2*	38.6	44.8
Wholesale trade	18.3	46.8	43.1
Business and misc. services	9.9*	68.3	21.4
Non-durable manufacturing	11.5	66.6	18.6

* high sampling variability

Section

This section deals with both sides of the energy equation that has such a profound impact on human health. Although it is not possible to reach any conclusions here about energy balance, nevertheless, this research represents the first time in Canada that a major national survey has treated both nutrition and exercise in any kind of depth. The Nutrition Canada Survey collected extensive detail on food consumption while the Canada Fitness Survey obtained comprehensive information on physical activity. Rather than repeat these ambitious undertakings, the HPS collected only baseline information on practices and complemented this with questions on beliefs, attitudes and knowledge concerning nutrition and exercise. The findings make it clear that both topics are high priorities for many Canadians.

Heather Nielsen's chapter on nutrition provides an update on breakfast eating habits and weight/height ratios. An important new topic is desired weight, with implications for nutrition education. Useful information about attitudes and beliefs are also reported.

The chapter on exercise by Thomas Stephens reports the most recent figures on the prevalence of exercise and relates activity level to health status. Knowledge of the health benefits of physical activity is inferred by comparing actual exercise levels to perceived adequacy of exercise. There are important implications for health promotion in this chapter as well.

11

Nutrition

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Acknowledgements: This chapter was produced with the active collaboration of Andres Petrasovits, Health and Welfare Canada, and benefitted from review by Nancy Schwartz, School of Family and Nutritional Science, University of British Columbia.

Highlights

- Eating breakfast is a common practice but what is eaten varies.
  - Only 18% of Canadians indicate they eat nothing or only tea/coffee for breakfast every day.
  - Breads and cereals are eaten most frequently on a daily basis; eggs and meat are eaten least frequently.
- Weight is a concern to many Canadians.
  - Just over half of Canadians report a body weight-for-height which puts them into a category of "good weight for most people". About 15% are underweight and the other 30% are in categories which indicate increasing risks to health.
  - Women, particularly young women, are more likely to be in the lowest category of weight, while men, particularly middle-aged men, are more likely to be in the highest category.
  - Over 50% of Canadians want to change their weight, primarily through weight loss. About 70% of women at a "good weight-for-height" want to lose weight as do 23% of women in the lowest weight category.
  - Losing weight in the future is seen by 10% of Canadians as the most important action to improve health.
  - About 21% of all Canadians and 30% of smokers agree with the statement that "smoking helps you to stay slim". Among smokers, particularly male smokers, the lower their height-weight ratio, the more likely they are to agree with the statement.
- Over 66% of adult Canadians believe they can improve their health by changing their eating habits.
  - 13% intend to improve eating habits in the year following the survey. About 12% believe that improving eating habits was the single most important action taken in the year preceding the survey.
  - Of the 8% who want to improve their eating habits, about 62% say barriers to improvement exist, the most common being lack of time and energy.
- Most Canadians believe that some foods should be limited or avoided and that others should be eaten more often for health reasons.
  - The most important types of foods to be avoided are those high in: fat (35%), cholesterol (27%), and sugar (24%).
  - Fruits and vegetables are acknowledged as the most important type of food to increase for health reasons.
- There is support for a government role in dealing with nutrition.
  - About 40% of Canadians feel it is very important for government to deal with nutrition. More women than men feel that it is important.
  - Over 50% of those who want more information on health topics choose nutrition as a topic.

Methodology

Information about eating habits, beliefs and attitudes concerning nutrition reported in this chapter was drawn mainly from Q. 74-78 and 80-81 (see Appendix B for the questionnaire). Certain other questions (e.g., Q. 4, 7, 79, 99, 106-109) covered a range of issues including nutrition.

In many of these questions, the term "eating habits" was used in preference to nutrition, as it is more readily understood. However, it is also a more specific term than nutrition and is more focused than the French-language equivalent, a fact which should be remembered when making comparisons between Quebec and the other provinces.

The "unknown" or "not stated" category is excluded from these tables. For most questions, this amounts to no more than 1% of respondents and has little bearing on the results.

Another factor to bear in mind in reading the findings is that the results are not standardized for characteristics such as age, sex and socio-economic status. Thus interprovincial comparisons do not take into account the fact that the population of each province has a different distribution of age and education level, for example. While this lack of standardization may reduce some of the inter-group differences reported in this chapter, it is unlikely to have more than a minor impact in most cases. This topic is dealt with at greater length in Appendix A.

As is true of almost all survey questions, the ones on nutrition are subject to certain kinds of error. In particular, reported weight can be expected to be less than actual weight in many instances, thus biasing the calculation of weight/height ratios. The expectation of substantial recall error, without long and detailed questioning, explains the absence of questions in this survey on food consumption patterns. Nevertheless, the question on breakfast habits has been used previously, and does permit comparison with earlier surveys, as do many of the other questions about beliefs and intentions.

Breakfast eating habits

When asked "In the last week, on how many days did you have the following for breakfast?" (Q. 74), most adult Canadians report that they usually have a breakfast which is more substantial than just a cup of coffee. Only 18% indicate they consume nothing or only tea or coffee for breakfast every day (Figure A).

The food group most frequently included on a daily basis is bread and cereals (50%); food least frequently consumed daily is eggs or meat (9%). Fruits or juices and milk products are each eaten daily by 43% of Canadians.

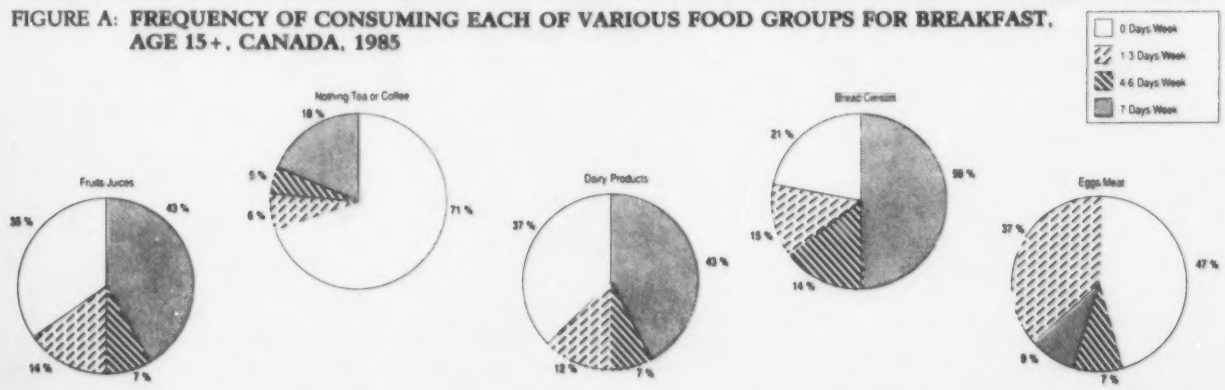
Canadians over 65 years of age are most likely (92%) to have some food for breakfast compared to those between 25 and 34 years who are least likely (78%) to do so (Table 1).

Discussion

"Eating breakfast" was identified by Berkman and Breslow[1] as one of seven health habits associated with good health and longevity. While the type of breakfast eaten cannot be easily documented in the Health Promotion Survey, the common ingredients are bread and cereals with probable inclusion of fruits or juices and/or dairy products. At any rate, over 82% of Canadians have something more than tea or coffee for breakfast.

The pattern described in the Health Promotion Survey is similar to that described in the 1982/83 *Canadian Eating Habits Trend Analysis Report*.[2] Fifteen percent of respondents reported having no food for breakfast in that analysis. There were some differences in the proportion consuming different food groups, perhaps due to differences in method, but the trends were generally compatible with those

FIGURE A: **FREQUENCY OF CONSUMING EACH OF VARIOUS FOOD GROUPS FOR BREAKFAST, AGE 15+, CANADA, 1985**



reported here. In 1981, 14% of Canadian adults reported eating nothing for breakfast – not even coffee or tea.[3] These figures suggest that the prevalence of skipping breakfast in Canada has been fairly stable in recent years at about one in six persons.

Weight and health

Reported Weight-for-Height

A weight standard in the final stages of development by the Expert Committee on Weight Standards[4] was used to assess the weight status of Canadians. The basis is the Body Mass Index (BMI = Weight (kg)/Height^2 (m)). Cut-off points are applied to establish categories of body size in relation to health for men and women over 20 years of age. The categories are:

- BMI of 20 or less may be associated with health problems in some people ("underweight");
- BMI of 20 to 25 is good weight for most people ("acceptable weight");
- BMI of 25 to 27 may lead to health problems in some people ("possibly overweight"); and
- BMI of 27 or more indicates increasing chances of developing health problems ("overweight").

Respondents were asked to report their weight and height without shoes (Q. 13, 14). Just over one-half of Canadians have a body weight-for-height which puts them in a category of "acceptable weight". About 15% fall into each of the other three categories (Figure B).

There are differences in patterns among men and women. More men (39%) fall into the "possibly overweight" and "overweight" categories than women (26%). More women (22%) than men (6%) fall into the "underweight" category. This is true at every age level (Table 2).

More men (31%) in the "possibly overweight" category are likely to rate their health as excellent (Q. 1), than in the lowest (19%) and highest (18%) weight categories. Conversely, women in the "underweight" category were more likely to rate their health as excellent (30%) than were those in the "possibly overweight" and "overweight" categories (18%).

Desired weight

More than 50% of Canadians aged 20 or over want to change their weight (Table 3). About 93% of women in the "overweight" category want to lose weight, most over 9 kilograms. While women in the "possibly overweight" category are least likely to want to change weight, almost half still want to lose up to 4.5 kilograms. Even the vast majority of those women who are assessed as "good weight-for-height" want to lose some weight. Men do not demonstrate the same desire to lose weight and those in the lowest weight categories want to gain weight.

About 7% of the population aged 15 and over responded with the answer: "lose weight" to the question: "What is the most important thing you could personally do to improve health?" (Q. 4). This ranks fourth out of six possible actions (Table 2, Chapter 15). About 4% of Canadians report losing weight as the most important thing they did over the year prior to the survey to improve their health (Q. 106) and 10% intend to lose weight in the following year (Q. 109)(Table 5, Chapter 15).

A majority of Canadians show positive attitudes towards weight control as reflected in their responses to two statements (Q. 80). Only 9% would rather be overweight than have to give up many of the foods they like and 7% believe that "Skipping breakfast is an effective way to control or reduce your weight." Women and Canadians with higher income or education levels show the most positive attitudes on these issues (data not shown).

About 21% of Canadians agree that smoking helps you stay slim. More smokers (30%) than non-smokers (18%) are likely to agree with this statement. The lower the weight-for-height ratio, the more likely are smokers, especially male smokers, to believe that smoking helps control weight.

Answers to a separate question concerning perceptions of spouse's behaviours (Q. 73) indicate that about 20% of Canadians believe their spouse over-eats. More than twice as many women (27%) as men (12%) believe their spouse over-eats.

Discussion

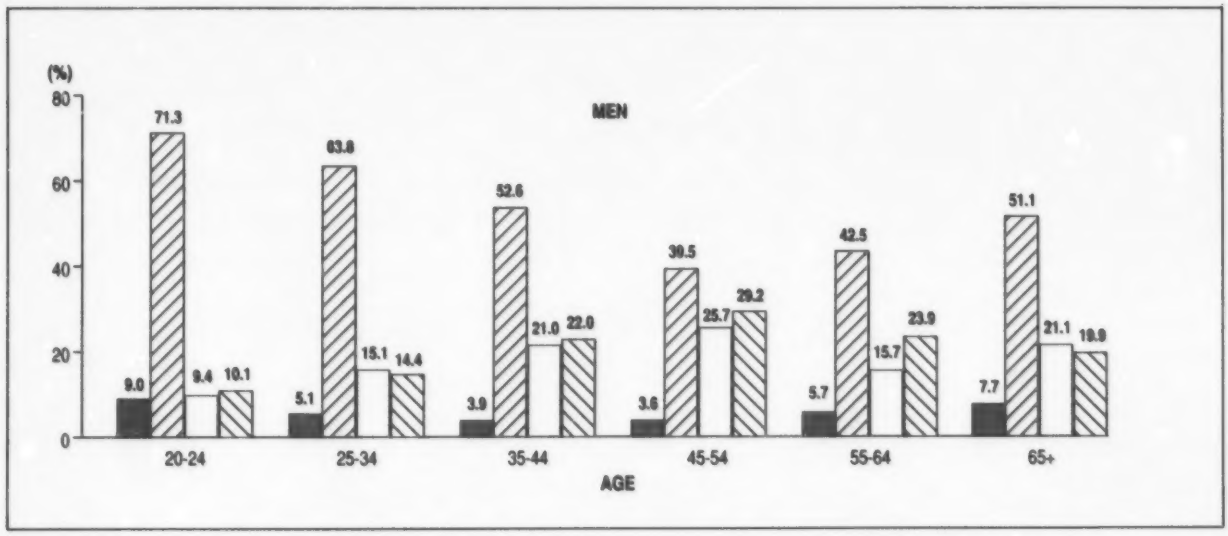
The validity of self-assessment for weight/height measures has been questioned as self-reported weight is frequently under-estimated.[5] Thus the prevalence of overweight is lower here than in studies which were able to obtain actual measurements, such as the Canada Fitness Survey.[6] Nevertheless, the patterns observed here for age and sex are consistent with those reported for Canada, Britain and the United States,[7] and are similarly suggestive of a "survivor phenomenon" since the prevalence of overweight declines in the oldest age group.

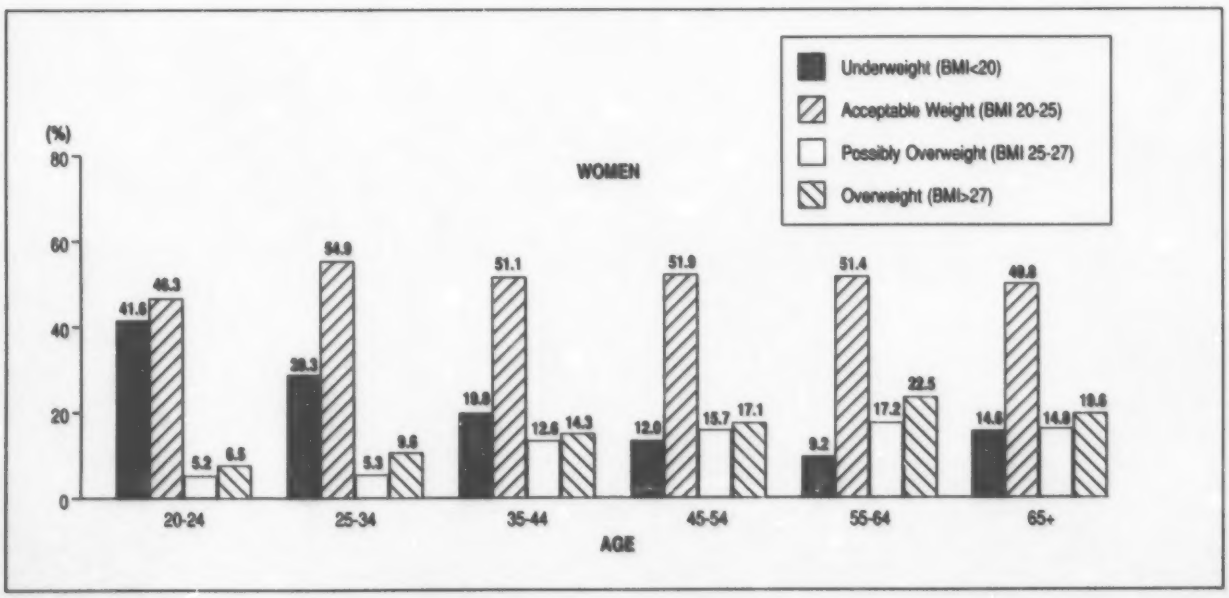
The public concern with weight indicated by these results appears to be well entrenched. In the Canada Fitness Survey,[3] 57% rated maintaining their weight as very important. In the present

study, about 50% of respondents want to change weight. In a 1984 Gallup poll,[8] over half of Canadian adults considered themselves to be overweight and over 25% were trying to lose weight.

The key reasons for changing weight may vary[8] from acknowledging the risk of specific disease (73%), to general poor health (41%), to poor appearance (17%). The present data suggest that appearance may be more important than health as an incentive to lose weight or that some Canadians are not well informed about healthy weight levels. How else can one explain the greater desire of women to lose weight, a wish which is even shared by women who are already at or even under a healthy weight for their height?

FIGURE B: **PERCENTAGE OF POPULATION IN EACH WEIGHT STATUS GROUP (BASED ON BODY MASS INDEX OF ACCEPTABLE WEIGHT-FOR-HEIGHT), BY AGE AND SEX, AGE 20+, CANADA, 1985**





Nutrition information

In response to the question "On which of the following topics do you feel you need more information (Q. 12), 12% of Canadian adults chose "nutrition". This represents more than half of those who wanted information on any topic (Table 4, Chapter 15). This information need is more strongly held by women, younger Canadians (age 15-44) and those with secondary education or more (Table 5, Chapter 15). There is a higher proportion (58%) in the first income quintile who want more information than at the fifth (47%) and more in Quebec than in other provinces (data not shown).

People who reported their main activity during the 12 months preceding the survey as working at a job or business were asked if they were aware of programs at work to improve health, fitness or nutrition (Q. 99). About 41% of this wage-earning population is aware of such programs. Greatest awareness is among those with degrees or diplomas (52% compared to 29% with less than secondary education) and for higher income levels (57% in the fifth quintile compared to 26% in the first quintile (data not shown).

Discussion

Canadians receive information about nutrition from a wide range of individuals and agencies. Government can play a very important role as indicated by this and other studies. In the Nutrition Concepts Study,[9] about 70% of respondents felt government ought to provide nutrition information. Mothers surveyed in a 1979 study[10] generally felt government was competent and unbiased in providing nutrition information.

Canadians apparently want more information on nutrition. However, government agencies and materials are often not recognized as sources of information. Professionals (e.g., physicians) and sources such as magazines and television programs are most often cited.[9,11] In many cases, of course, these sources rely upon government-produced information as primary references.

Attitudes and beliefs about nutrition

Changes in eating habits

Respondents were asked: "Do you think you could improve your health by changing your eating habits?" (Q. 81). Over 66% responded affirmatively.

There is a steady drop with increasing age in the proportion of Canadians who anticipate health benefits from changes in eating habits and there is a greater tendency for women than men in most age groups to hold this belief (Table 4).

In response to the question "What is the most important thing you should personally do to improve your physical health?" (Q. 4), 11% of respondents replied "improve eating habits". When asked, "What is the single most important thing you have done in the past year to improve health?" (Q. 106), 12% chose improved eating habits. About the same proportion (13%) chose improved eating habits as a resonse to Q. 109: "Considering the health topics we've discussed in this questionnaire, is there anything you intend to do to improve your health over the next year?" (Table 4). Younger age groups appear to attach more importance to improving eating habits than do older age groups; gender differences are small and inconsistent.

There is a gradual increase in the proportion of those who indicate that changing eating habits could improve health from 62% in the first income quintile to 76% in the fourth income quintile. No appreciable differences in the relationship of eating habits to improving personal health emerge from analysis of the education and provincial variables (data not shown).

Of the 11% of Canadians who want to improve their health by improving their eating habits, about 62% say that barriers exist. The most common barrier for 34% of this group is lack of time and energy (data not shown).

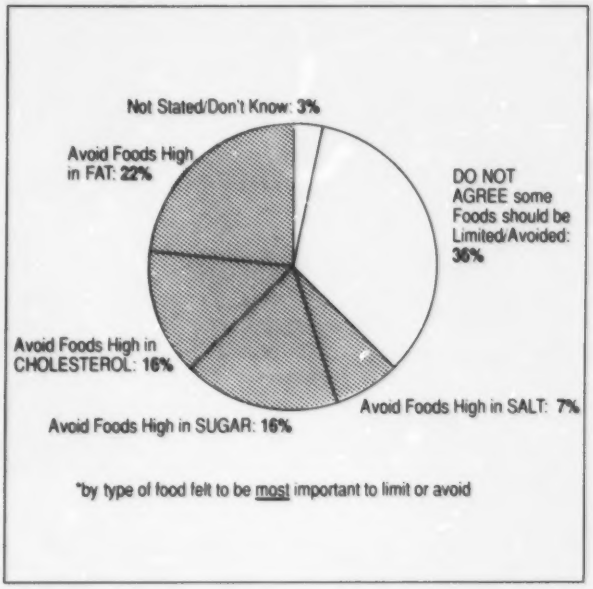
Food selection

Respondents were asked if they believe that some foods should be limited or avoided for the sake of health (Q. 75). Those responding affirmatively were asked to identify the food type they believed most important to limit (Q. 76).

Most Canadians (64%) believe that there are foods which they should limit or avoid for the sake of their health (Figure C). The most important types of foods to be limited or avoided are foods high in: fat, cholesterol and sugar. Only 4% of adult Canadians believe that limiting their salt intake is the most important food selection decision for them to make.

More women than men (70% compared to 58%) in all age categories believe some foods should be limited or avoided for health reasons (Table 5). From age 25 on, men are equally concerned about cholesterol and fat, while women, at least up to age 64, focus their concern on fat and sugar. For both sexes and at all ages, limiting salt in the diet is a low priority. The belief that any foods should be limited or avoided is associated with amount of education: 73% with university education compared to 53% with elementary school education believe in the benefits of limiting or avoiding certain foods (data not shown).

FIGURE C: **PERCENTAGE OF POPULATION WHICH AGREES/DOES NOT AGREE THAT SOME TYPES OF FOOD SHOULD BE LIMITED OR AVOIDED FOR THE SAKE OF HEALTH,* AGE 15+, CANADA, 1985**


Not Stated/Don't Know: 3%
Avoid Foods High in FAT: 22%
DO NOT AGREE some Foods should be Limited/Avoided: 36%
Avoid Foods High in CHOLESTEROL: 16%
Avoid Foods High in SALT: 7%
Avoid Foods High in SUGAR: 16%
*by type of food felt to be most important to limit or avoid

A similar set of questions was asked regarding increased consumption of certain foods (Q. 77, 78). As shown in Figure D, 63% of adult Canadians believe there are foods which they "should eat more often for the sake of your health".

With increasing age, there is decreasing belief in emphasizing certain foods from 74% of 15-24 year-olds, to 39% of those 65 and over. Women show more support for this belief than men, particularly in younger age groups. Canadians with higher education levels and higher income levels tend to agree more often than those at lower levels (data not shown).

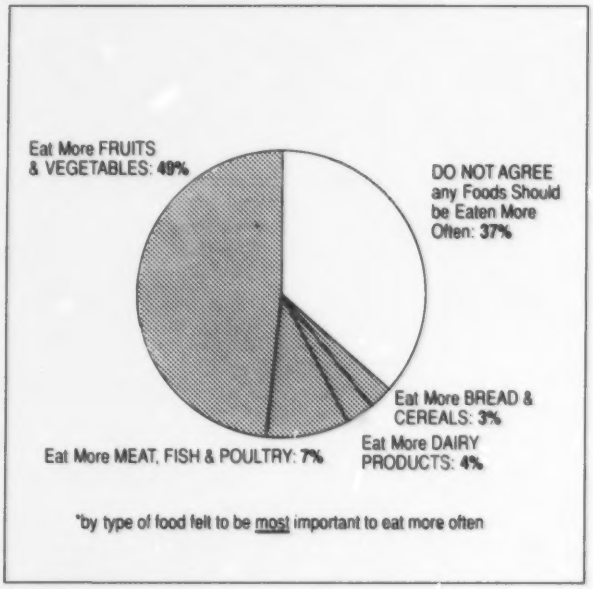
Of those who agree with the need to increase consumption of certain foods, 77% cite fruit and vegetables as the most important foods. Comparatively, all other categories are rarely mentioned (Figure D).

Respondents were asked (Q. 80) if they agreed or disagreed that "Following a healthy diet is expensive and time consuming." One-quarter agreed with this statement. Agreement is inversely related to income and education levels (data not shown).

Importance of government role

About 40% of Canadians feel it is very important for government to deal with "eating habits" (Q. 79) (Figure E). This feeling is more widely held by women (47%) than by men (32%) in all age categories. The importance is lower in Ontario and Manitoba than in Quebec (Table 6, Chapter 15).

FIGURE D: **PERCENTAGE OF POPULATION WHICH AGREES/DOES NOT AGREE THAT THERE ARE ANY FOODS THAT SHOULD BE EATEN MORE OFTEN FOR THE SAKE OF HEALTH,* AGE 15+, CANADA, 1985**


Eat More FRUITS & VEGETABLES: 49%
DO NOT AGREE any Foods Should be Eaten More Often: 37%
Eat More BREAD & CEREALS: 3%
Eat More DAIRY PRODUCTS: 4%
Eat More MEAT, FISH & POULTRY: 7%
*by type of food felt to be most important to eat more often

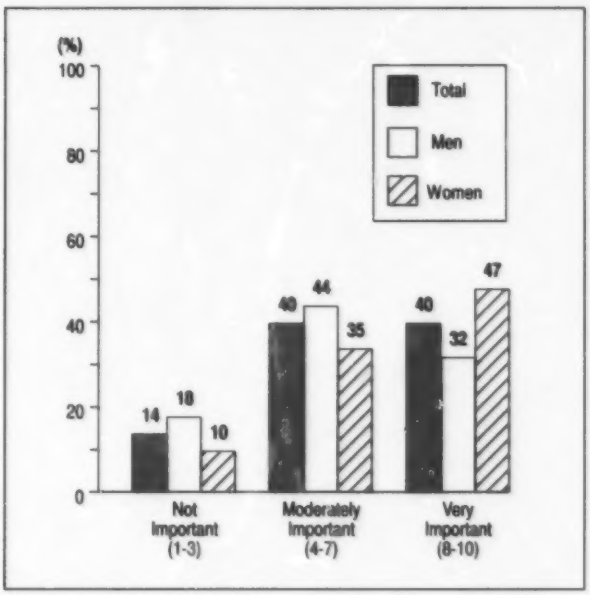
Discussion

A positive relationship between health and eating habits seems widely but not universally understood, as 66% of Canadians indicate that improving eating habits would improve health. This finding is consistent with the Canada Fitness Survey[3] in which eating a good diet ranked as the second most important health action by 95% of respondents. In the 1979 Nutrition Concepts Study,[9] 80% of Canadians interviewed felt a sensible diet was important to them personally.

Only 12-13% of Canadians state that improved eating was the most important change made for health in the year preceding the survey, or was even an intention in the coming year. This is only one-fifth of those who endorse the general principle of good nutrition leading to good health. Presumably the majority of these people believe they are already eating well. Beliefs about good nutrition do not always translate into behaviour or even intentions. In the Nutrition Concepts Study,[9] about 40% of respondents said they made changes in eating habits over the year preceding the survey. This

proportion was similar to that observed for men in the GPMC study.[10] Studies of specific populations in Ontario, i.e. men employed in industry[12] and rural and urban women,[13] also show positive changes are being made in food habits. If the number of people changing their eating habits seems lower in 1985, it may be because the HPS specified the most important change for health in the year preceding the survey.

FIGURE E: "HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH NUTRITION?", BY SEX, AGE 15+, CANADA, 1985



The fact that women generally express greater concern than do men about food selection is consistent with their greater concern over health issues generally, as documented throughout this report. Their focus on fat and sugar is consistent with the desire to lose weight, reported earlier in this chapter.

The view held by 64% that there is a need to limit or avoid certain foods is consistent with other studies.[9,10] It is also consistent with the Nutrition Recommendations for Canadians which advocate reducing calories from fat to 35% of total calories and consuming a diet which minimizes salt and refined sugars. Other studies[11,14] suggest that Canadian caloric intake is about 40% fat.

Limiting or avoiding specific foods with higher fat content has also been reported earlier.[9,10,13] Results of the HPS suggest that interest in limiting foods high in cholesterol is important for men. This is encouraging, given the high prevalence of coronary disease for men and the potential role played by cholesterol in this disease. On the other hand, the very low concern over salt intake suggests the need for public education on the relationship of this dietary component to hypertension.

The need to increase intake of certain foods has been observed in other studies, and the strong bias towards increasing fruits and vegetables is also consistent with earlier reports.[9,10,13] The Nutrition Concepts Study reported that vegetables were most frequently associated with balanced or sensible diets.[9] Increasing emphasis on both the low energy value and high fibre content could contribute to this perception. Since consumption of fruits and vegetables is frequently reported to be below suggested levels,[14] this is an area emphasized in many educational programs. The results of the HPS suggest that these efforts are meeting with some success, at least with respect to beliefs.

"Eating habits" was ranked lowest of the eleven health issues requiring government action. This may be as a result of the terminology used in the survey — an attempt was made to avoid more complex and perhaps misunderstood terms such as nutrition. The markedly higher rating received for this issue in Quebec may be due in part to the use of a more comprehensive term than "eating habits" in the French-language questionnaire.

Policy and program implications

Canadians recognize that they should make changes in behaviour such as overall eating habits and, more specifically, in choice of specific foods. However, past and planned actions are not always consistent with the awareness of the need for change.

As an aspect of health promotion, nutrition has focused to a large extent on individual behaviour change. Strong collective interest and awareness can act as a base for furthering group action toward environmental change.

A high degree of interest in weight control exists in Canada. A focus on those who are below acceptable weight-for-height ratios in developing weight standards and in reporting population statistics is a new development. The proportion of Canadians at both extremes is similar. While the degree of risk and the type of problems which occur differ, a combined risk-reduction and quality-of-life program is needed for weight control. In developing these programs, it is important to recognize that similar proportions of those at all weight levels consider themselves to be "in excellent health" or "very good health." Segmentation of the population is particularly relevant to actions as demonstrated by the differences in problems for young women and middle-aged men.

Direction is needed to respond to associated risks in lifestyle such as the relationship of smoking to controlling weight.

The role of government in dealing with nutrition is less important to many Canadians than the need for nutrition information. However, it is well-established that government is believed to be the most credible provider of such information.

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TABLE 1: **DISTRIBUTION OF POPULATION WHICH CONSUMES (BY CONSUMPTION OF) SELECTED FOODS AT BREAKFAST, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	Tea/ Coffee		Breads/ Cereal		Fruits/ Juices		Milks/Dairy Products		Eggs/Other Meats	
	A+	B++	A+	B++	A+	B++	A+	B++	A+	B++
Total 15+	70.6	17.6	20.9	50.1	35.1	43.2	36.8	43.3	47.0	8.6
Men	71.0	17.1	22.0	47.2	36.9	40.3	36.7	42.6	42.9	11.6
Women	70.3	18.1	19.7	52.8	33.4	46.0	36.8	44.0	51.1	5.7
AGE										
15-24	67.4	17.3	21.7	38.4	34.0	41.4	30.3	48.2	47.0	8.3
M	70.5	14.2	19.9	39.4	32.4	43.5	27.1	53.9	40.3	12.7
W	64.2	20.4	23.7	37.3	35.6	39.3	33.6	42.3	54.0	3.7*
25-34	64.6	22.3	26.5	42.6	41.0	35.1	39.6	38.3	47.7	6.7
M	61.7	23.0	28.2	39.4	42.4	29.7	43.3	33.1	47.5	8.6
W	67.4	21.6	24.8	45.4	39.7	40.3	35.9	43.5	47.9	4.9
35-44	66.7	19.2	23.2	45.5	37.0	39.7	41.4	38.3	44.7	5.6
M	70.8	16.7	22.0	44.9	36.5	39.7	39.1	39.7	39.8	6.6
W	62.5	21.8	24.3	46.1	37.6	39.8	43.7	36.9	46.6	4.5*
45-54	71.1	18.3	18.8	56.0	34.7	43.1	39.8	40.2	42.5	11.6
M	67.7	22.4	25.3	50.1	39.8	37.9	44.1	34.4	40.0	15.9
W	74.4	14.3	12.4	62.1	29.6	48.3	35.4	46.0	45.0	7.2
55-64	76.5	16.6	17.6	64.0	33.7	48.9	37.4	44.9	49.3	9.7
M	77.2	15.8	19.1	60.5	40.1	41.9	38.8	41.2	47.6	11.9
W	75.8	17.3	16.1	67.3	27.8	55.4	36.0	48.4	50.9	7.7
65+	87.1	7.6	10.9	71.6	25.4	61.2	32.8	52.5	51.7	13.1
M	89.4	6.4*	12.6	65.3	29.0	58.5	27.9	55.2	42.2	19.1
W	85.5	8.5	9.5	76.4	22.7	63.2	36.5	50.5	58.9	8.6

* high sampling variability
\+ A = zero consumption per day
\+\+ B = consumption every day

TABLE 2: **DISTRIBUTION OF POPULATION OVER WEIGHT-FOR-HEIGHT CATEGORIES, BY AGE AND SEX, AGE 20+, CANADA, 1985**

	Weight-for-Height (BMI+)			
	"Underweight" (BMI <20)	"Acceptable Weight" (BMI 20 – 25)	"Possibly Overweight" (BMI 25 – 27)	"Overweight" (BMI > 27)
	May be associated with health problems for some people	Good weight for most people	May lead to health problems in some people	Increasing chance of developing health problems
	%	%	%	%
Total 20+	13.7	53.0	15.2	16.9
Men	5.6	54.7	19.4	19.4
Women	21.5	51.4	11.2	14.4
AGE				
20-24	25.1	58.9	7.3	8.3
M	9.0	71.3	9.4	10.1
W	41.6	46.3	5.2	6.5
25-34	16.8	59.3	10.2	12.0
M	5.1	63.8	15.1	14.4
W	28.3	54.9	5.3	9.6
35-44	11.8	51.9	16.8	18.2
M	3.9*	52.6	21.0	22.0
W	19.8	51.1	12.6	14.3
45-54	7.8	45.7	21.4	23.2
M	3.6*	39.5	25.7	29.2
W	12.0	51.9	15.7	17.1
55-64	7.5	47.1	21.5	23.2
M	5.7*	42.5	15.7	23.9
W	9.2	51.4	17.2	22.5
65+	11.6	50.4	17.5	19.7
M	7.7*	51.1	21.1	19.9
W	14.6	49.8	14.8	19.6

+ Weight/Height or Body Mass Index (BMI) is calculated as follows:
BMI = Weight (kg) ÷ Height ^{2}(m)
* high sampling variability

TABLE 3: **DISTRIBUTION OF POPULATION DESIRING CHANGE (LOSS OR GAIN) IN THEIR WEIGHT, BY AMOUNT OF DESIRED WEIGHT CHANGE, SEX AND BODY MASS INDEX+ (WEIGHT/HEIGHT), AGE 20+, CANADA, 1985**

		WEIGHT CHANGE				
		% Desiring Loss			% Desiring Gain	
Body Mass Index	% Desiring any change	9.1 Kg or more	between 4.6-9.0 Kg	4.5 Kg or less	4.5 Kg or less	4.6 Kg or more
MEN						
Total	58.4	8.4	12.7	23.8	6.8	6.7
Underweight (BMI <20)	61.9	- -	- -	- -	18.8*	43.1
Acceptable Weight (BMI 20-25)	45.4	- -	5.8	22.6	9.8	7.2
Possibly Overweight (BMI 25-27)	66.7	3.7*	18.0	41.8	–	–
Overweight (BMI >27)	83.6	37.5	31.0	15.1	- -	- -
WOMEN						
Total	68.2	13.3	16.7	33.8	2.8	1.6
Underweight (BMI <20)	38.7	- -	- -	22.9	9.9	5.9*
Acceptable Weight (BMI 20-25)	69.8	2.4*	16.9	49.2	1.3*	- -
Possibly Overweight (BMI 25-27)	88.2	24.3	40.7	23.2	- -	- -
Overweight (BMI >27)	92.7	64.2	21.6	6.9*	- -	- -

+ Weight/Height or Body Mass Index (BMI) is calculated as follows:
BMI = Weight (kg) ÷ Height ^{2}(m)
* high sampling variability
– not releaseable
- - nil or zero

TABLE 4: **ATTITUDES AND BELIEFS ABOUT EATING HABITS AND HEALTH, BY AGE AND SEX, AGE 15+, CANADA, 1985**

	"Changing eating habits could improve your health"	"Improving eating habits is the *most* important thing to do to improve your physical health"	"Improving eating habits was the most important action last year to improve your health?"	"Do you intend to improve eating habits to improve your health next year?"
	% Agree	% Agree	% Agree	% Yes
Total 15+	66.4	11.1	11.6	13.4
Men	64.4	10.9	8.0	10.1
Women	68.3	11.3	15.0	16.5
AGE				
15-24	79.6	18.2	12.6	18.9
M	74.3	15.2	6.6	14.1
W	86.1	21.0	18.9	13.9
25-34	73.8	8.9	12.9	13.9
M	74.3	8.5	9.3	10.6
W	73.3	9.3	16.5	17.2
35-44	71.1	10.7	13.4	14.2
M	68.4	11.7	10.1	12.2
W	73.9	9.7	16.7	16.1
45-54	63.8	10.6	10.3	10.9
M	61.6	11.2	8.0	7.0
W	66.1	10.0	12.6	14.9
55-64	55.7	9.1	10.7	8.5
M	52.6	10.6	7.9	4.9*
W	58.5	7.9	13.3	11.8
65+	35.0	14.3	6.8	8.6
M	33.5	14.6	5.0*	6.4*
W	36.1	14.1	8.2	10.3

* high sampling variability

TABLE 5: PERCEPTION RE: FOODS TO AVOID, BY AGE AND SEX, AGE 15+, CANADA, 1985

	"Are there any foods you think you should limit or avoid, for the sake of your health?"	"If yes, which of the following types of foods are *most* important to limit or avoid? Those high in			
	% Yes	Fat %	Cholesterol %	Sugar %	Salt %
Total 15 +	63.9	34.5	26.8	24.2	10.9
Men	57.7	35.4	29.6	19.0	11.0
Women	69.9	33.7	24.5	28.7	10.9
AGE					
15-24	65.3	36.2	24.6	27.4	9.3
M	57.2	41.8	21.7	23.2	8.9
W	74.3	31.7	26.9	30.9	9.6
25-34	65.8	31.4	27.2	27.2	10.7
M	57.2	32.2	30.1	20.0	12.3
W	74.3	30.8	25.1	32.7	9.6
35-44	68.0	34.5	26.7	25.2	10.7
M	66.1	33.5	32.3	19.5	11.4
W	70.0	35.5	21.4	30.6	10.1
45-54	62.9	37.2	26.4	21.1	11.3
M	56.8	33.8	34.0	18.5	7.6
W	69.0	40.1	20.2	23.2	14.5
55-64	60.6	37.7	27.6	19.2	11.9
M	52.0	37.4	34.1	8.2	15.5
W	68.6	37.9	23.0	26.9	9.4
65+	55.9	31.4	29.9	19.7	13.6
M	52.6	30.2	30.2	18.3	11.6
W	58.3	30.2	29.7	20.6	14.9

12

Exercise

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Highlights

- One-half of Canadian adults are regularly active during their leisure time.
- One-quarter admit to being completely sedentary.
- Over 5 million persons are at risk of health problems which could be avoided or reduced by increased exercise.
- The proportion who are active tends to decline with age, but increases with amount of education.
- There are quite wide interprovincial variations in activity level.
- There are no consistent differences between men and women.
- Canadians in excellent health and those who are very happy are more active.
- Fifty-eight percent of adults believe they exercise less than they should.
- Many adult Canadians are unaware of how much exercise is adequate.
- Many more people report increased exercise in the year preceding the survey and the intention to exercise more in the year following the survey than other changes in health practices.
- Inactive people are not very motivated to change their ways even though they are broadly aware of possible benefits.

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Introduction

Exercise is a complex activity to measure, since it varies in form, frequency, intensity and duration. For economy's sake, the survey questionnaire focused on leisure time and defined exercise in terms of form and intensity (referring to "vigorous activities such as calisthenics, jogging, racquet sports, team sports, dance classes or brisk walking") and enquired about the frequency of sessions lasting at least 15 minutes. By this means, it was hoped to avoid reports on very brief or low-intensity activities and focus on those which, by their nature and duration, may have a positive impact on health.

In addition to describing their exercise frequency, respondents were asked to compare their activity with other persons their age. Beliefs about the health benefits of more exercise and ratings of the adequacy of one's own exercise level were the other questions in this section.

The exercise section of the questionnaire (Q. 23-26) was placed close to the beginning. Responses of "don't know" and missing answers were extremely rare (about 2% and .2% respectively); thus they are not shown in the tables.

A factor affecting the conclusions to be drawn from some of the tables in this chapter is the lack of standardization for the data reported. That is, the estimated frequencies have not been adjusted for age, education, or other such characteristics which vary with activity level. Thus the inter-provincial differences in Table 2, for example, reflect both differences in the prevalence of activity and differences in the composition of the populations.

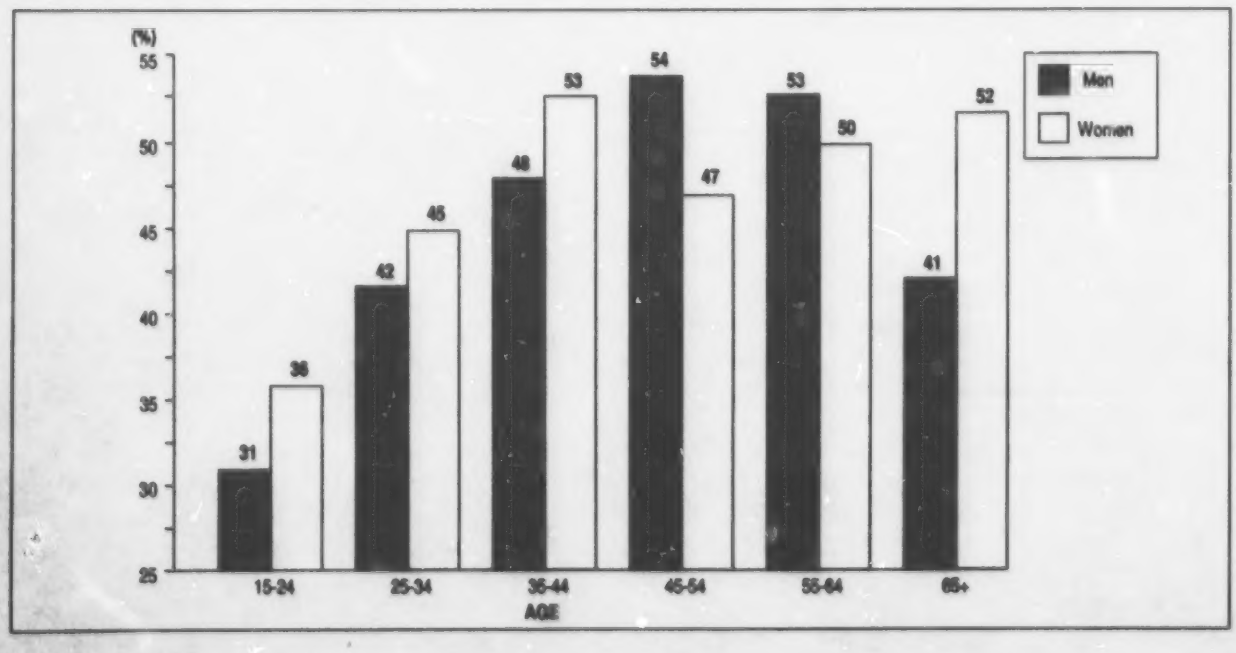
Prevalence of exercise

Frequency of exercise is reported here in three categories: "regular" (3 or more times per week), "occasional" (1-2 times weekly) and "sedentary" (never exercise or exercise less than once per week). As noted above, each occasion comprises at least 15 minutes of vigorous exercise.

By this definition, slightly over half (54%) of adult Canadians can be described as regular exercisers. Approximately one-quarter (27%) are sedentary and the balance of 18% exercise once or twice a week (Table 1 and Figure A).

While the youngest age group claims the greatest proportion of regular exercisers (66%), the decline over the years is rather gradual. The least active group is age 55-64 (47%). Moreover, this is the only age group in which the sedentary are as common as the active, but this is restricted to men. The greatest difference between adjacent age groups in the proportion of "regulars" is between the groups

FIGURE A: **PERCENTAGE OF POPULATION WHICH IS INACTIVE (EXERCISES LESS THAN 3 TIMES WEEKLY), BY AGE AND SEX, AGE 15+, CANADA, 1985**



aged 15-24 and 25-34. After this age, regular exercisers remain a fairly constant proportion of each age cohort. However, the sedentary category grows at the expense of the occasional exercisers; only for the youngest group are there more occasional exercisers than sedentary individuals.

Differences between men and women are rather slight, averaging only 3% more active for the men overall. For ages 45-54 and 55-64, it is the women who are more active (Table 1).

There is a positive relationship between education level and frequency of exercise. Those with a college or university education are the most likely to be regularly active and least likely to be sedentary while those who have not finished high school are 9% less likely to be regularly active and 13% more likely to be sedentary (Figure B).

Provincial activity levels are shown in Table 2. These reveal a rather wide range in the proportions of the population who are regularly active — from 66% of Yukoners to 46% of Quebeckers. Differences between men and women also vary among the provinces and territories. The largest discrepancies, where men are the more active sex, are in the four Atlantic provinces. In the rest of Canada, the sex differentials are much reduced or absent altogether. Figure B shows the distribution of the inactive population in the provinces and Yukon Territory.

When comparing their physical activity levels to people their own age (Q. 25), 37% of adults regard themselves as more active and only 20% as less active. Approximately 40% believe their activity levels are average. There is a very strong tendency for people with active friends to be active themselves (Q. 70), and for married people to be regularly active if their spouse is active (Q. 73). For example, people married to active individuals are 20% more likely to exercise regularly than people with sedentary spouses; those who describe most or all of their friends as active are 41% more likely to be regularly active themselves than people with no active friends (Table 3). This strong association with the activity level of friends and spouse is equally true for both men and women (data not shown).

Exercise and health

Two standard questions were used to collect respondents' ratings of their own health; one was oriented to health in general (Q. 1) and the other to happiness (Q. 9). Without exception, regular exercisers reported themselves healthier and happier than occasional exercisers (Figure C).

FIGURE B: **PERCENTAGE OF POPULATION WHICH IS INACTIVE (EXERCISES LESS THAN 3 TIMES WEEKLY), BY EDUCATION AND BY PROVINCE, AGE 15+, CANADA, 1985**

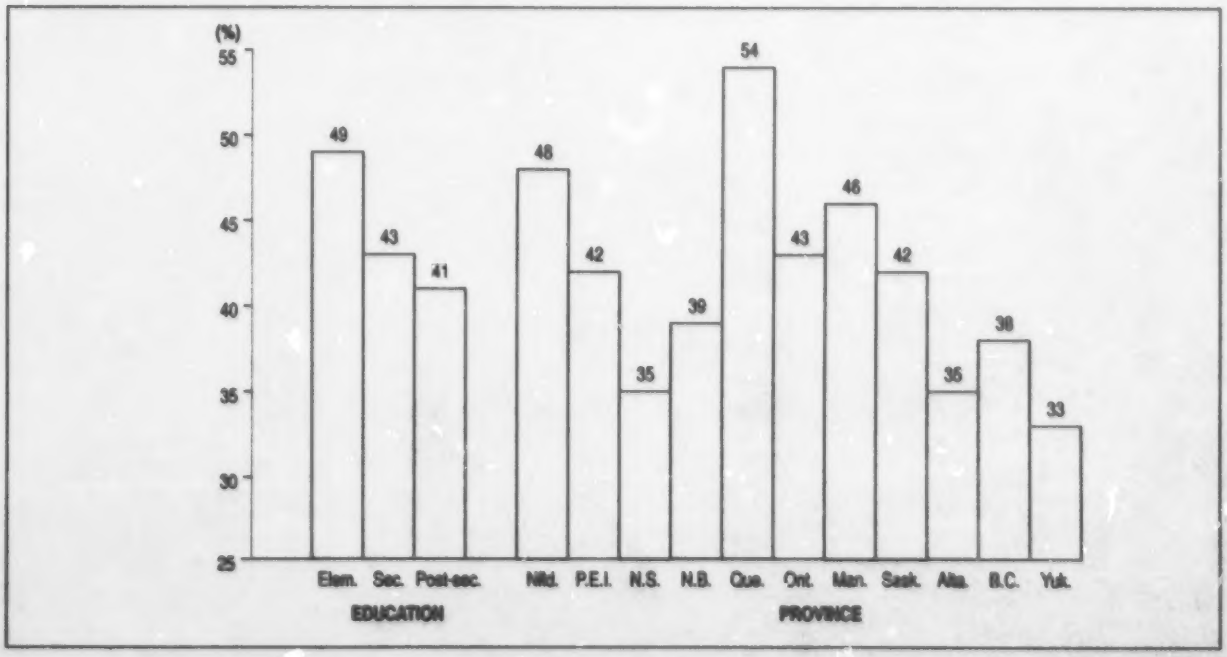


Table 4 shows the activity levels of those who rated their health as "excellent." For both sexes, and in each of the age groups used in this analysis, the regular exercisers consistently account for the highest proportion of those in excellent health, while the sedentary are almost always the category with the lowest proportion. Findings for the self-rated happiness question are very similar: for both men and women, those describing themselves as "very happy" are most likely to be regular exercisers, in every age group (Table 5).

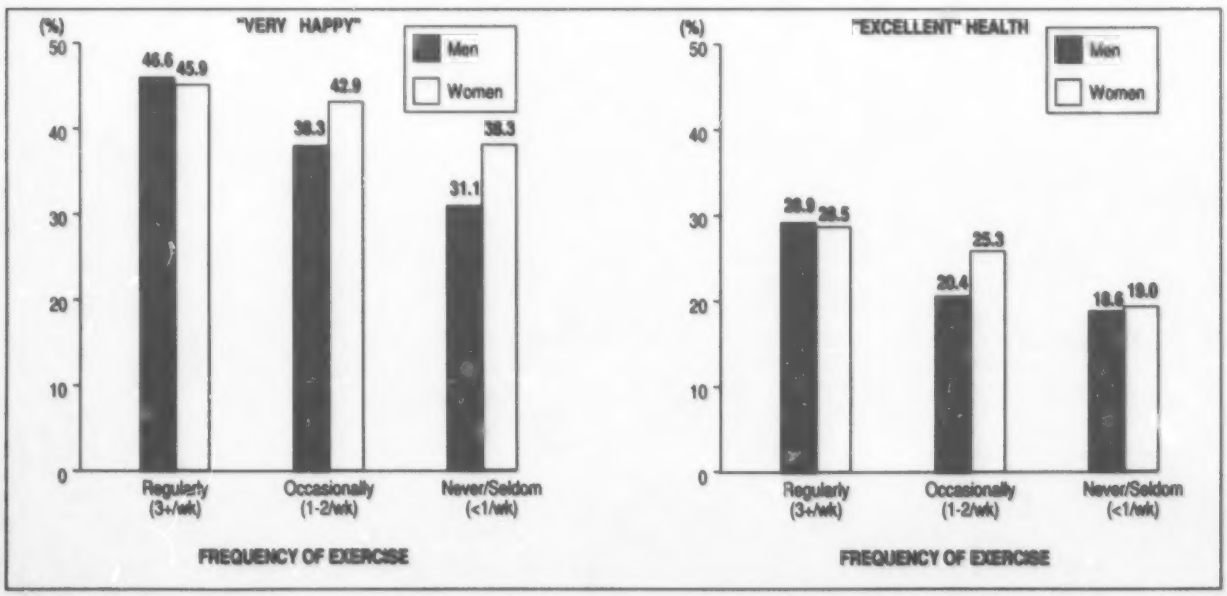
Survey participants were asked to describe "the single most important thing you have done in the past year to improve your health" (Q. 106). Of those who responded affirmatively, increased exercise was by far the most frequent change. This is true for both sexes and every age group (data not shown). However, a larger number responded *negatively* to this question in every age group except the youngest (age 15-24). An increase in exercise in the last year was reported by 46% of those who made any change and 29% of the total population. This latter number declines steadily with advancing age with the exception of a slight increase for men age 65+. The tendency toward increased exercise in the past year is positively associated with education, but only the university-educated are more likely to increase exercise than to do nothing at all (data not shown).

In addition to describing changes in the past year, survey participants were asked if there was anything they intended to do to improve their health in the upcoming year (Q. 109). Findings are very similar to Q. 106: the most common intention for all age and sex groups is more exercise (33% overall), but this is less common than the intention to make no changes (38%). Intention to exercise more increases as education increases but only the university-educated are more likely to increase exercise than to do nothing. Women of every age are more likely than men to intend to exercise more, but this intention declines with age for both sexes. (Tables and further details on past changes and future intentions are found in Chapter 15.)

Knowledge and beliefs about exercise

When asked in the context of a health survey if they believe they get as much exercise as they need (Q. 23), 42% of Canadian adults answer in the affirmative. A clear majority (58%) feel that they exercise less than they should. Men of all ages are more likely than women to think their activity level is adequate; this belief is also most common among those age 65 and over, and least common for those age 25-44. Those with only elementary school education

FIGURE C: **PERCENTAGE OF POPULATION WHICH IS VERY HAPPY, AND PERCENTAGE WHICH REPORTS EXCELLENT HEALTH, BY FREQUENCY OF EXERCISE AND SEX, AGE 15+, CANADA, 1985**



are 10% more likely than university graduates to believe they exercise sufficiently (Table 6). Interprovincial differences in this belief are limited, ranging from a low of 35% in Quebec to a high of 48% in Yukon Territory who regard their exercise level as sufficient (data not shown).

When belief about exercise adequacy is compared with actual exercise level, it becomes clear that many Canadians are unaware of how much exercise is enough. Assuming that a minimum of three weekly sessions is required for health benefits, we see that the regular exercisers are most likely, by a very substantial margin, to regard their activity as adequate. Occasional exercisers and sedentary people are only about one-third as likely to perceive their activity as sufficient. However, the proportions of less active people who believe they are exercising enough are not trival — 22% of occasional exercisers and 19% of the sedentary (Table 6).

Almost 60% of adult Canadians believe that more exercise will benefit their health a great deal (27%) or at least moderately (33%). Only 17% anticipate no benefit (Table 8). This belief in the health benefits of exercise is strongest amongst the young and weakest amongst the older group, a majority of whom expect little or no benefit from becoming more active. There are no meaningful differences between men and women in this belief, nor between various education levels (data not shown).

Table 7 also shows considerable variation among the provinces in the extent of belief in the health benefits of more exercise, ranging from a high of 37% in Quebec anticipating a great deal of benefit, to a low of 19% in Saskatchewan. Quebec is the only province where those anticipating a great deal of benefit outnumber those expecting little or no benefit.

When self-rated health status is considered, there are no differences between groups in the health benefits anticipated from greater exercise (data not shown), but actual exercise level does affect this expectation. Among age groups 25-44, inactive people are much more likely to anticipate a great deal of benefit from increased exercise than are regularly active people (Table 8).

Slightly over 4 000 000 Canadians (21% of the adult population) both describe themselves as less than regularly active and also believe that more exercise is the most important thing they should do for their own health (data not shown). Proportionately, there are more such people in the age groups 25-34 and 35-44, and fewer 65 and over. When asked if anything is stopping them from exercising more, the only significant barriers cited are a lack of time (34%) and a lack of self-discipline or energy (17%). All others, including cost, lack of knowledge and absence of social support, are mentioned only rarely. Overall, 60% of those who believe they should do something to improve their health identify more exercise as the most important measure to take (Q. 4). Although this belief is most prevalent at younger ages, it is far higher than for any other change in the health habits. In contrast, of those who believe they should do something to improve the way they cope with stress, only 17% identify exercise (Q. 7). Further details of these findings on future health practices are found in Chapter 15.

Discussion

Prevalence of exercise

Estimates of the prevalence of regular exercise in the population are strongly influenced by the definition used. A recent review of major exercise surveys[1] reported estimates for the active adult population ranging from 15% to 78%, figures which reflect the wide range of definitions employed. The current estimate of 54% is very close to the value of 56% classified as "active" in the 1981 Canada Fitness Survey.[2] That definition was "participated in sports or conditioning for 3 or more hours per week during 9 or more months of the year."

The prevalence of activity reported in Table 1 bears much the same relationship to age and sex as for other definitions of activity;[1] there is a decline in regular exercisers with age and a slight tendency for men to be more active than women. The present results agree with the detailed analysis of the Canada Fitness Survey[3] that shows there are more regular execisers in the older age group than in the middle ages. The positive association with education is also familiar from earlier surveys.[1] The high level of physical activity in Yukon Territory is a new finding, since data have not previously been available for that territory. In other respects, the interprovincial differences are very similar to those reported for the Canada Fitness Survey. The reasons behind the varied male-female differentials between provinces are not clear, but presumably are related to choice of activity, e.g., hunting and fishing by men in Nova Scotia.[3]

These patterns suggest that this question on exercise has some constructive validity and may be used for classification purposes in further analysis with some confidence. Whether or not it provides a good estimate of prevalence will depend on how the definition of regular activity is interpreted.

Because the definition used in this survey specifies vigorous activity for a minimum duration of 15 minutes, the regular exercisers likely receive some health benefits. Although exercise bouts lasting 30 minutes would be preferable, potential benefits of this 15-minute

regimen include weight control and better glucose tolerance (both of which lessen the risk of adult-onset diabetes), fewer symptoms of anxiety and depression, and extended musculoskeletal integrity including delayed or lessened osteoporosis.[4,5]

The exercise intensity required for cardiovascular health benefit is evidently higher than that required for these other health outcomes,[4] and is higher than reflected in the definition of "regularly active" in this survey. Thus the prevalence of those who can anticipate significant cardiovascular benefits must be substantially below 54%; this was estimated to be 25% of Canadian adults in 1981.[3] While some increase since then is conceivable, it is not possible to estimate this from the present data, nor is it likely to be very large.

This interpretation suggests that the 5.3 million sedentary adults receive no health benefits, and that this is a conservative estimate of the population at risk. Recent attempts to encourage exercise by the older part of this population appear to be paying off, however, suggesting now that attention needs to be directed to the middle-age groups, especially of men. A comparison of age groups indicates that the sedentary category gains members from the occasional exercisers, while the regularly active remain fairly stable. This suggests that a regular exercise program may be more easily maintained than an irregular one. A longitudinal study, following the same individuals over several years, is needed to confirm any hypotheses regarding long-term exercise patterns.

The likelihood that active people have active friends and an active spouse is not surprising, although the strength of this association is striking. It is not possible to determine from these data whether active friends influence others to become active, or whether active people choose active friends. There is probably some truth in both explanations, indicating the social nature of physical activity and hinting at the difficulty of encouraging individuals to be active when they do not live or work in a supportive milieu.

Exercise and health

In the absence of detailed questions about health status, the best single indicator is to ask individuals to rate their health relative to their age peers. This has been shown to produce valid responses.[6] The positive association with regular exercise found here (Table 4) is consistent with other surveys, whether the health indicators are self-ratings,[2] reports of doctor visits or use of medications,[7] or "hard" end-points such as coronary disease or death.[5] Similarly, the positive association between exercise and general happiness (Table 5) is entirely consistent with other surveys which have used a variety of definitions of activity and mental health. While survey data permit no inferences about cause and effect, more detailed analysis of the Canada Fitness Survey and three other large surveys shows that this association holds even after age, sex, socio-economic status and physical health have been accounted for.[8]

Only a longitudinal study can establish whether exercise results in good health or healthy people choose to exercise. While the latter is undoubtedly true, there is considerable evidence from experiments and prospective studies that exercise is of benefit to both physical and mental health.

Knowledge and beliefs about exercise

Most adult Canadians appear to be able to assess the adequacy of their own exercise levels (Table 6). However, a substantial number (40%) of those who exercise occasionally or are sedentary believe they get all the exercise they need. Men at every age are more likely than women to believe that they exercise sufficiently. This may be because physically demanding jobs are primarily held by men or because of the frequently-observed fact that women are generally more conscious of their own health.

Beliefs about the potential health benefits of exercise provide another indication that, although knowledge levels among adult Canadians are reasonably high, there is room for improvement. While all but the most active 10-15% would probably benefit from more exercise, 38% anticipate little or no benefit (Table 7). Furthermore, expectations of benefit are the strongest amongst the young and the weakest amongst the older group. In reality, it is probably the eldest who have most to gain, particularly in the short-term.

The reduced expectations of benefit on the part of the regularly active (age 25-44, Table 8) compared to the inactive are realistic, since the greatest gains tend to result from making the transition from sedentary to even modest activity.[4] This association explains why there are such marked differences between the provinces in expectations of benefit. A large proportion realistically anticipates benefit in Quebec, whose population is least active.

Adult Canadians appear to believe that the health benefits associated with exercise are mainly physical in nature. More exercise is identified as a strategy of choice for 60% of those who feel they should do something for their physical health, but by only 17% who believe they should improve the way they cope with stress. These figures reflect the emphasis on cardiovascular health and weight control which has characterized fitness promotion. A broadening of the message seems warranted.

Implications for health promotion

Targets

1. All adults of both sexes require continuing reinforcement.
2. Middle-aged men require special attention.
3. Efforts directed at the elderly should continue.
4. New and occasional exercisers must be reinforced.
5. Fitness promotion still has little impact on the less-educated.

Messages and strategies

1. The health benefits of exercise should be stressed, recognizing that different population groups will have different priorities (see Table A).
2. The exercise prescriptions for various health outcomes need to be better explained.
3. The positive contribution of exercise to mental health, especially as a means of coping with stress, deserves more emphasis.
4. Sedentary and occasional exercisers need to understand that the greatest gains come early in a regular exercise program and that consistency is more important than intensity for most health outcomes.
5. People still need to be convinced that they can find the time to exercise on a regular basis and that formal, structured programs are not essential to achieve benefits.
6. The sedentary may profit from learning how to overcome or ignore their friends' and spouse's inactivity.

Rationale

1. Although substantial numbers intend to exercise more, and acknowledge the need to do so, there are still many who are sedentary and many who discount the potential health gains.
2. The middle-aged are now the least active age group, due to successful efforts to persuade older Canadians to become more active. However, those age 25-44 appear to be susceptible to exercise promotion which stresses health benefits.
3. Lack of time and self-discipline are still perceived as major impediments to an active lifestyle, as they were in 1981.[2]
4. Not everyone wants to jog or join a dancercise class, nor does everyone need to in order for their health to benefit.

TABLE A: **POTENTIAL HEALTH BENEFITS TO EMPHASIZE WHEN PROMOTING EXERCISE**

	Men	Women
AGE		
15-34	cardio-respiratory (CR) endurance and strength for sports coping with stress	weight control and body composition CR endurance and strength for sports coping with stress prevention of osteoporosis
35-54	CR endurance and strength for recreation and household activities weight control and body composition improve glucose tolerance coping with stress and fatigue	weight control and body composition CR endurance and strength for recreation and household activities coping with stress and fatigue reduce risk of osteoporosis improve glucose tolerance
55+	continue functional capacity reduce coronary heart disease risk enhance psychological well-being weight control glucose tolerance	continue functional capacity reduce coronary heart disease risk enhance psychological well-being weight control glucose tolerance

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TABLE 1: **DISTRIBUTION OF POPULATION OVER CATEGORIES OF EXCERCISE FREQUENCY, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985**

	Population (000's)	Regular (3+/wk) %	Occasional (1-2/wk) %	Never/Seldom (< 1/wk) %
Total 15+	19,611	54.3	17.8	26.9
Men	9,623	55.7	18.1	24.1
Women	9,989	52.9	17.6	28.7
AGE				
15-24	4,330	66.5	20.8	12.4
M	2,200	68.8	18.8	11.8
W	2,130	64.2	22.8	12.9
25-34	4,480	54.9	21.5	21.7
M	2,230	56.4	23.0	18.5
W	2,250	53.5	20.1	24.9
35-44	3,530	49.1	22.3	28.2
M	1,770	51.5	23.4	24.7
W	1,760	46.6	21.2	31.6
45-54	2,520	49.4	16.7	33.7
M	1,260	46.0	17.9	35.9
W	1,260	52.8	15.5	31.5
55-64	2,310	46.5	10.2	41.5
M	1,110	44.8	9.6	43.8
W	1,120	48.2	10.7	39.3
65+	2,450	51.2	7.8	39.4
M	1,050	57.2	6.2*	34.4
W	1,380	46.7	9.0	43.4
EDUCATION				
Elementary	7,173	49.0	15.4	33.9
Secondary	7,871	56.6	18.6	24.0
Post-secondary	4,368	58.4	20.8	20.6

* high sampling variability
Note: Row percentages may not total 100 because of the small, unreported "don't know" category, which averages 1%.

TABLE 2: **DISTRIBUTION OF POPULATION OVER CATEGORIES OF EXERCISE FREQUENCY, BY PROVINCE AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	Regular (3+/wk) %	Occasional (1-2/wk) %	Never/Seldom (<1/wk) %
Canada	19,611	54.3	17.8	26.9
Men	9,623	55.7	18.0	25.0
Women	9,989	52.9	17.6	28.7
Newfoundland	423	51.3	18.2	29.9
M	211	57.5	15.7	25.7
W	212	45.0	20.6	34.1
P.E.I.	96	56.8	11.7	29.9
M	47	64.6	8.0*	26.9
W	48	49.2	15.3	32.9
Nova Scotia	681	56.9	12.4	29.0
M	334	63.4	10.1	24.4
W	347	50.6	14.6	33.4
New Brunswick	544	58.4	13.9	25.2
M	268	63.9	11.8	22.0
W	277	53.0	15.8	28.2
Quebec	5,148	45.9	21.3	32.5
M	2,506	48.4	22.2	29.3
W	2,641	43.6	20.4	35.6
Ontario	7,096	55.4	17.9	25.4
M	3,462	54.9	19.0	24.2
W	3,634	55.9	16.8	26.5
Manitoba	818	53.2	15.6	30.7
M	400	53.6	14.9	31.1
W	418	52.9	16.2	30.3
Saskatchewan	759	57.5	14.6	27.3
M	378	60.9	11.8	26.5
W	381	54.2	17.2	28.2
Alberta	1,762	63.4	12.9	22.5
M	889	65.9	13.7	19.7
W	873	60.9	12.2	25.3
B.C.	2,267	60.6	18.3	19.9
M	1,118	66.7	17.4	20.4
W	1,149	60.4	19.1	19.3
Yukon	17	65.7	14.0	18.9
M	9	68.9	11.1	18.7
W	8	62.2	17.1	19.1

* high sampling variability
NOTE: Row percentages may not total 100 because of the small, unreported "don't know" category, which averages 1%.

TABLE 3: **DISTRIBUTION OF POPULATION OVER CATEGORIES OF EXERCISE FREQUENCY, BY FRIENDS' AND SPOUSE'S ACTIVITY LEVEL, AGE 15+, CANADA, 1985**

	Population (000's)	Regular (3+/wk) %	Occasional (1-2/wk) %	Never/Seldom (<1/wk) %
Total 15+	19,611	54.3	17.8	26.9
Among those with:				
No friends active	2,271	39.4	13.6	46.3
A few friends active	8,530	47.0	22.3	29.6
About half are active	4,061	61.8	19.6	18.3
Most or all active	3,070	80.8	10.2	8.3
Among those:				
Married	12,074	50.6	18.0	30.5
Spouse active	6,154	60.4	18.4	20.1
Spouse not active	5,794	40.0	17.7	45.1

NOTE: Row percentages may not total 100 because of the small, unreported "don't know" category which averages 1%

TABLE 4: **PERCENTAGE OF POPULATION WHICH ASSESSES ITS OWN HEALTH TO BE EXCELLENT, BY FREQUENCY OF EXERCISE, AGE AND SEX, AGE 15+, CANADA, 1985**

		% Among those who exercise:		
	% Total Population	Regularly (3+/wk)	Occasionally (1-2/wk)	Never/Seldom (<1/wk)
Total 15+	25.0	28.7	22.8	18.8
Men	24.9	28.9	20.4	18.6
Women	25.0	28.5	25.3	19.0
AGE				
15-24	23.2	27.0	16.3	14.9
M	22.9	27.1	13.1	15.5
W	23.6	27.0	19.1	14.3
25-44	28.2	31.8	25.8	21.7
M	26.1	30.1	20.9	17.9
W	30.3	33.6	31.2	24.5
45-64	23.8	27.7	23.9	19.5
M	25.4	30.7	23.8	20.4
W	22.3	25.0	24.0	18.4
65+	19.7	24.1	23.0	13.9
M	23.5	25.6	40.8	17.8
W	16.8	22.4	13.7	11.6

TABLE 5: **PERCENTAGE OF POPULATION DESCRIBING ITSELF AS "VERY HAPPY", BY FREQUENCY OF EXERCISE, AGE AND SEX, AGE 15+, CANADA, 1985**

		% Among those who exercise:		
	% Total Population	Regularly (3+/wk)	Occasionally (1-2/wk)	Never/Seldom (<1/wk)
Total 15+	41.9	46.2	40.6	34.9
Men	40.8	46.6	38.3	31.1
Women	42.9	45.9	42.9	38.1
AGE				
15-24	46.0	49.6	39.0	39.8
M	42.8	48.1	27.9	38.2
W	49.3	51.2	48.5	41.3
25-44	45.0	48.8	43.8	39.6
M	43.1	49.3	42.1	30.7
W	46.9	48.2	45.7	46.4
45-64	35.0	40.4	35.2	28.4
M	34.6	40.0	39.7	27.2
W	35.3	40.7	30.5	29.8
65+	38.1	40.9	37.9	34.9
M	41.7	45.1	44.2	37.4
W	35.3	37.1	34.5	33.4

TABLE 6: **PERCENTAGE OF POPULATION WHICH BELIEVES IT EXERCISES SUFFICIENTLY, BY FREQUENCY OF EXERCISE, AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985**

		% Among those who exercise:		
	% Total Population	Regularly (3+/wk)	Occasionally (1-2/wk)	Never/Seldom (<1/wk)
Total 15+	41.8	60.3	21.7	18.6
Men	47.3	65.9	24.6	23.2
Women	36.5	54.5	18.8	14.8
AGE				
15-24	48.7	61.9	24.5	18.1
M	59.4	70.3	39.7	26.6
W	37.6	52.6	11.4	10.0
25-44	36.1	55.7	17.9	12.2
M	41.0	61.3	19.4	15.1
W	31.3	49.6	16.2	10.0
45-64	40.1	58.8	21.0	23.4
M	42.4	62.0	16.2	30.0
W	37.8	55.9	26.0	16.2
65+	51.7	74.9	45.7	23.0
M	56.8	78.6	44.2	22.0
W	47.8	71.4	46.5	23.7
EDUCATION				
Elementary	46.4	71.2	10.8	16.8
Secondary	39.8	84.0	7.1	8.8
Post-secondary	36.9	81.9	10.2	7.8

TABLE 7: **PERCENTAGE OF POPULATION WHICH BELIEVES THAT MORE EXERCISE WOULD IMPROVE HEALTH, BY AGE, SEX, AND PROVINCE, AGE 15+, CANADA, 1985**

	Total Population (000's)	A Great Deal %	Moderately %	A Little/ Not at All %
Total 15+	19,611	26.8	32.8	38.0
Men	9,623	25.6	32.2	40.4
Women	9,989	28.0	33.4	35.7
AGE				
15-24	4,333	38.2	33.4	27.8
M	2,203	37.0	31.6	30.6
W	2,130	39.3	35.2	24.9
25-44	8,005	31.1	34.9	32.9
M	3,994	30.7	33.2	35.8
W	4,011	31.6	36.7	29.9
45-64	4,827	15.4	30.2	49.8
M	2,371	12.4	31.6	52.0
W	2,456	18.1	29.0	47.8
65+	2,446	12.7	21.1	61.1
M	1,054	13.6	20.5	61.8
W	1,392	12.0	21.5	60.5
PROVINCE				
Newfoundland	423	24.7	29.6	43.3
Nova Scotia	681	22.5	30.7	42.9
P.E.I.	96	28.0	28.5	38.8
New Brunswick	544	24.4	30.6	40.2
Quebec	5,148	37.4	27.0	33.9
Ontario	7,096	23.4	35.2	38.9
Manitoba	818	21.6	35.9	41.1
Saskatchewan	759	19.2	35.9	43.4
Alberta	1,762	24.8	35.5	37.5
B.C.	2,267	20.1	36.8	40.3
Yukon	17	25.4	34.9	37.1

TABLE 8: **PERCEIVED BENEFIT OF MORE EXERCISE, BY FREQUENCY OF EXERCISE AND AGE, AGE 15+, CANADA, 1985**

	Percentage of population which believes health would benefit:		
	A Great Deal %	Moderately %	A little/ Not at All %
Total 15+	26.8	32.8	38.0
Regular	26.5	32.5	39.7
Inactive*	27.7	33.0	36.3
AGE			
15-24	38.2	33.4	27.8
Regular	38.4	34.5	26.5
Inactive	37.9	30.9	30.4
25-44	31.1	34.9	32.9
Regular	27.3	32.9	39.2
Inactive	36.1	36.7	26.3
45-64	16.8	34.8	44.1
Regular	17.0	35.4	44.5
Inactive	16.9	34.7	43.6
65+	12.7	21.1	61.1
Regular	14.2	21.6	62.6
Inactive	11.5	19.7	60.6

* inactive = combines occasional and never/seldom exercisers

Section

This section represents a departure from Sections Two through Five which provide data on a variety of health risks and health enhancement behaviours, generally on a topic-by-topic basis. The four chapters comprising this section attempt to provide something of an overview and background for understanding the preceding ones.

Chapter 13, by Thomas Stephens, examines the interrelationships of many of the health practices considered earlier in this report. The questions answered here are whether good health practices occur in patterns and whether a healthy lifestyle, as defined by multiple healthy practices, is associated with better health.

Owen Adams presents and interprets a wide range of findings on health status in Chapter 14. Although this survey focuses on health behaviours, attitudes and knowledge, there is nevertheless a wealth of data on self-assessed health status, activity limitation and emotional health. Valuable trend data are also provided in this chapter.

Chapter 15 brings together data on intentions and attitudes relevant to most of the individual behaviours dealt with in Chapters 3-12. In this chapter, Thomas Stephens compares the population's concerns about health issues, needs for information and inclination to make changes toward better health.

The concluding chapter by Thomas Stephens attempts to extract some general themes from the mass of findings produced by the Health Promotion Survey. These themes are: (a) groups at risk, (b) positive developments and (c) outstanding challenges.

13

Health Behaviour and Health Status

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Acknowledgements: This chapter benefited from reviews by Ross M.G. Norman, who was with Memorial University of Newfoundland at the time, and Richard Jessor, University of Colorado. Both made helpful suggestions; time and space limitations made it impossible to pursue them all.

Highlights

- Positive correlations of small magnitude exist between most of the good health practices analysed here.
- A cluster of strongly interrelated practices for women consists of Pap smear tests, breast examinations, breast self-examination, and blood pressure checks.
- Smoking, drinking 4 drinks or more at a time and using illicit drugs make a cluster of practices for men.
- Two out of three adult Canadians claim to follow a healthy lifestyle.
- Number of good health practices – the healthfulness of one's lifestyle – increases with age and amount of education.
- Women are, except at age 15-24, more likely than men to lead a healthy lifestyle.
- Number of good health practices is positively related to self-assessed health status and to overall happiness.

* This chapter was prepared while the author was a visiting scientist at the Office of Analysis and Epidemiology, National Center for Health Statistics, Hyattsville, Maryland, USA.

Introduction

Several previous chapters have examined the prevalence of specific health practices in the Canadian population and have provided important information on the distribution of lifestyle-related risks. This one analyses the relationships among many of these practices and the association between health behaviour and health status. In essence, the following questions are answered:

- Is "healthy lifestyle" a meaningful and useful concept for health promotion?
- Is there an association between a "healthy lifestyle" and good health?

Most, but not all, of the health practices of previous chapters are considered here. Those left out are seatbelt use, possession of home smoke detectors and of fire extinguishers, the first two being mandatory in many jurisdictions, and the latter two being supplied for most apartment-dwellers. Those practices considered – seven for men and ten for women – are thus discretionary, although this is not to imply that they only result from the exercise of free will. In particular, breast examinations and PAP smears require a doctor's intervention. They are included here on the assumption that the doctor visit, and especially its timing, are at the patient's discretion.

The key questions describing a variety of health practices were taken from throughout the questionnaire and responses were dichotomized into "favourable" (worth one point in the summary index) and "unfavourable" (worth no points). Definitions are shown in Table A. Some favorable practices (e.g., for blood pressure checks and Pap tests) have been defined according to the standards of the Periodic Health Examination Task Force.[1] Others, such as exercise and drinking, have been defined according to earlier studies examining their relationship to health status.[2,3] Smoking and drug use are defined on the assumption that no level is healthy, even though there are dose/response curves for the consumption of each of these substances.

For convenience in analysis, good health practices followed by men have been grouped as 0-2/3-4/5-6/7, while for women, the categories are 0-4/5-6/7-8/9-10. Since the maximum is seven for men and 10 for women, these two groupings may be considered as equivalent in describing proportions of the maximum number of good practices, that is, as approximately 33/50/75/100%.

TABLE A: **DEFINITIONS OF FAVOURABLE/UNFAVOURABLE HEALTH PRACTICES**

	Question* Number	Favourable indicators/responses to question	Unfavourable indicators/responses to question
HEALTH PRACTICE			
1. Blood pressure check[1]	18		
age 15-24		ever in lifetime	never or "don't know"
age 25-44		within 2 years	more than 2 years ago
age 45+		within 12 months	more than 12 months ago
2. Exercise[2]	24	3+ times weekly	fewer than 3 times weekly
3. Smoking	27	not a current cigarette smoker	current cigarette smoker
4. Drinking[3]	39c	4 drinks/day	4+ drinks/day
5. Drug Use	49	no cocaine or cannabis in 12 months	cocaine or cannabis within 12 months
6. First Aid Kit	59	has kit in home	no kit in home
7. Breakfast	74	protein 4+ times weekly	protein 4 times weekly
8. Breast Exam[1]	61	within last 12 months	not within last 12 months
9. Breast Self-exam[1]	63	at least once every 2-3 months	less often than every 2-3 months
10. Pap Test[1] age 15-34 years	65	within last 2-3 years	more than 3 years ago
age 35+		more than 3 years acceptable	never or "don't know"

* Corresponding question from Canada Health Promotion Survey, 1985

Interrelationships of health practices

The most straightfoward technique for examining the interrelationships of health practices is to produce a correlation matrix. Since many of the practices vary in their prevalence with age, as reported in earlier chapters, the correlations reported in this chapter were calculated as partial correlations with age as the control variable. An additional control was to produce separate analyses for men and women.

Table 1 shows the results of these analyses. Of the 66 pairs of correlations, significant ($p < .001$) positive associations exist for 40 pairs. This suggests that good health practices are interrelated in the general population. However, the magnitude of these correlations is generally low: only 14 are equal to .10 or greater and none exceeds $r = .35$. In other words, the amount of variance accounted for in these associations ranges from about 1-10%.

Some patterns or "clusters" are worth noting. The clearest is among the three female prevention practices and blood pressure checks. For men, smoking, drinking and using illicit drugs tend to be associated.

Despite these variations, each practice makes a substantial contribution to the index of health practices, as shown in Table 2.

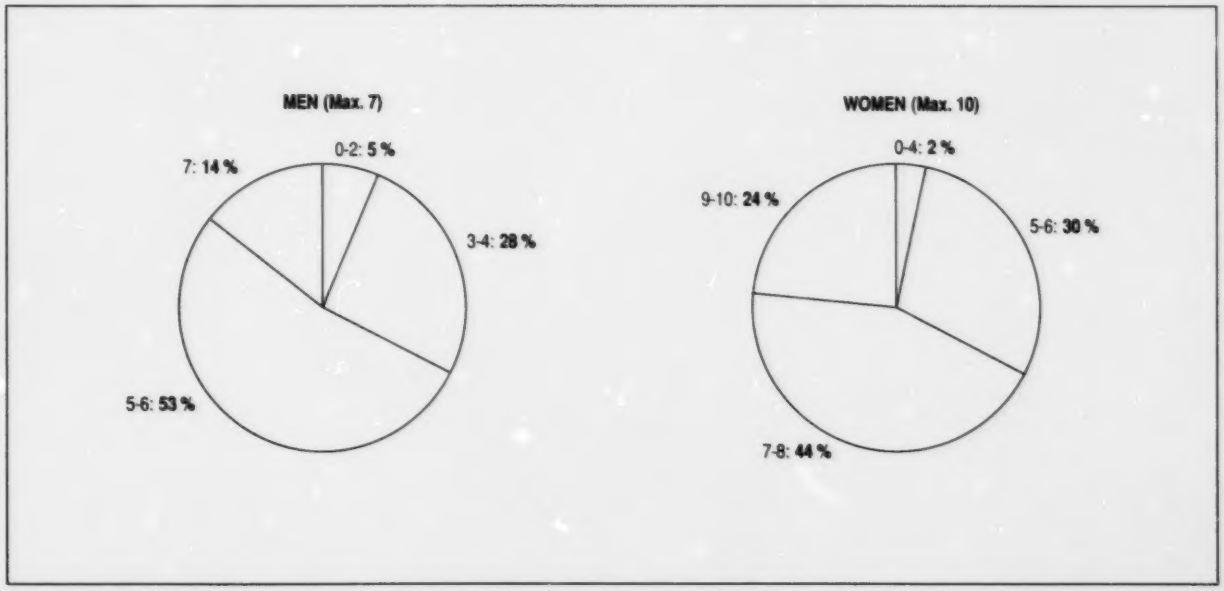
If "healthy lifestyle" is defined here as five to seven good health practices for men (out of a maximum of seven) and seven to ten such practices for women (out of a possible 10), over two-thirds of each sex describe themselves as following a healthy lifestyle (Figure A and Table 3). Only a very small fraction of the population follows a lifestyle which is generally hazardous, by this definition.

A healthy lifestyle is increasingly prevalent with greater age and education (Figure B and Table 3). The college-educated women over age 24 also have healthier lifestyles than their male counterparts, but there are more men than women following several good health practices at ages 15-24. (Women aged 65+ are problematic because the female preventive practices are less relevant to them than to their younger sisters. When these practices are ignored, older women are also seen to be leading healthier lifestyles than men of the same age.)

Discussion

Associations amongst good health practices are of more than theoretical interest. If patterns can be detected, they have implications for understanding risk-taking or health-enhancing behaviour, and thus for health promotion strategies.

FIGURE A: **DISTRIBUTION OF POPULATION ACROSS FAVOURABLE HEALTH PRACTICES ADOPTED, BY SEX, AGE 15+, CANADA, 1985**



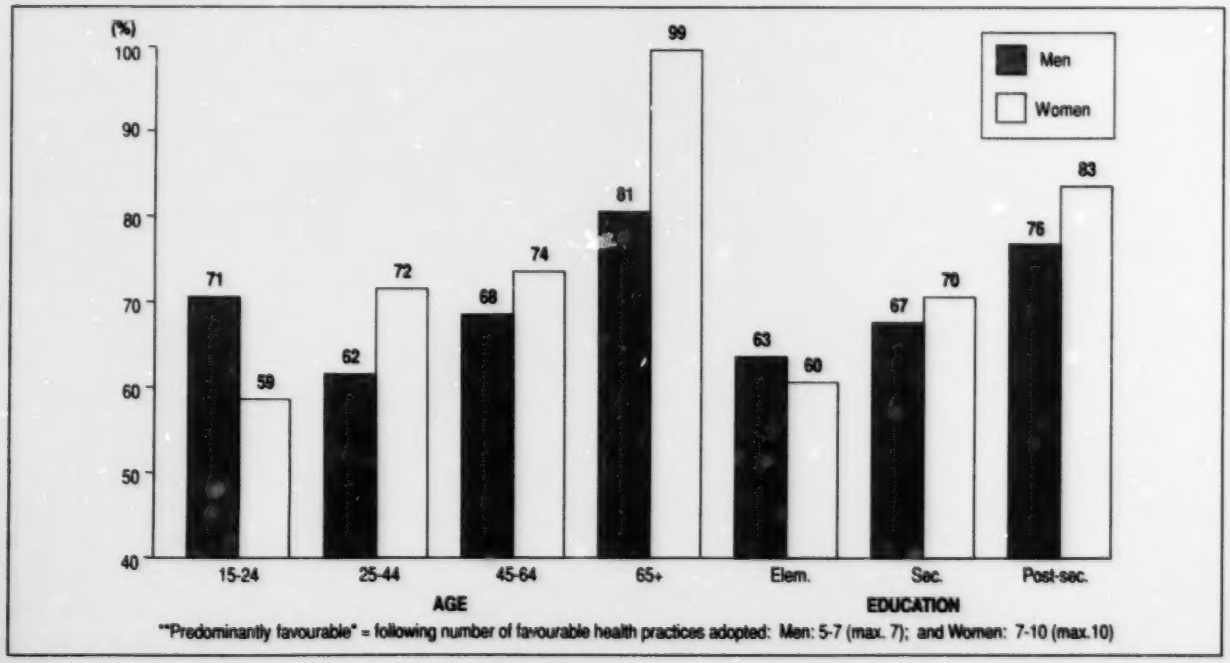
The strong associations among the female prevention practices seen here were also observed in the Canada Health Survey,[4] as was a similar relationship between alcohol use and smoking.[5] More striking, however, is the generally low level of positive association among these practices. This suggests that, for the population as a whole, the practice of a favourable health habit may predispose the individual to other good habits, but for all practical purposes, these habits are independent of each other.

This should not be surprising, considering the varying levels of knowledge about and importance attached to the various practices as well as the very complex motivations underlying human behaviour. The correlations in Table 1 would approach 1.0 only if all these practices were followed for health reasons, if health was valued above all else, and if individuals were perfectly rational in their behaviour. Apparently this is not the case. Recent Newfoundland data, for example, indicate that hedonism is a stronger consideration than health consequences in predicting health behaviour.[6]

A summary index can be a useful concept if its components each make a meaningful contribution and no single component predominates. On this basis, the separate male and female indices reported here have some merit (Table 2) and the scores for demographic groups are worth knowing. Thus, the relationship of health practices to age (Figure B, Table 3) is important because it shows that sex differentials interact with age. At the youngest age, the lifestyle of men is actually healthier. This age-sex interaction has been noted previously with regard to individual risks.[4] The important question is whether this is due to more risk-taking by young women or less by young men. A detailed examination of this question is beyond the scope of this chapter, but the findings on smoking and drinking in earlier chapters suggest that it is the women whose behaviour may be shifting. A more conclusive answer will be available after this survey is repeated in 1990. For the present, it is impossible to know whether the aging process or generational differences underlie these results.

Figure B and Table 3 reveal an increase in the proportion of both sexes following good health practices as age increases. This may be a survivor phenomenon, that is, a tendency for those with healthy lifestyles to live longer.[3] However, since the survey describes current, not lifetime, health practices, it is impossible to test this hypothesis with these data. If a survivor phenomenon is at work, however, it may not apply to women. After the age of 65, the proportion of women following seven to ten good practices falls off sharply compared to that

FIGURE B: **PERCENTAGE OF POPULATION FOLLOWING PREDOMINANTLY FAVOURABLE* HEALTH PRACTICES, BY AGE, SEX AND EDUCATION AGE 15+, CANADA, 1985**



in the 45-64 age group. Only if we broaden the definition of favourable health practices for the oldest group of women (to 5 or more practices), do they show an increase with age similar to the men (Figure B). Such broadening may be justified considering that the three female prevention practices are of prime concern to younger women.

The relationship between health practices and education is consistent with earlier reports on socio-economic disparities in risk exposure for cardiovascular disease,[7] as well as findings elsewhere in this report. Unlike male-female or young-old differences, socio-economic disparities apply to virtually every risk considered here. Nevertheless, it should be recognized that a majority at every educational level follows predominantly good health practices.

Health practices and health status

To examine the relationship between overall health practices and health status, the index described earlier was used, and the two bottom categories combined, since these contained so few cases.

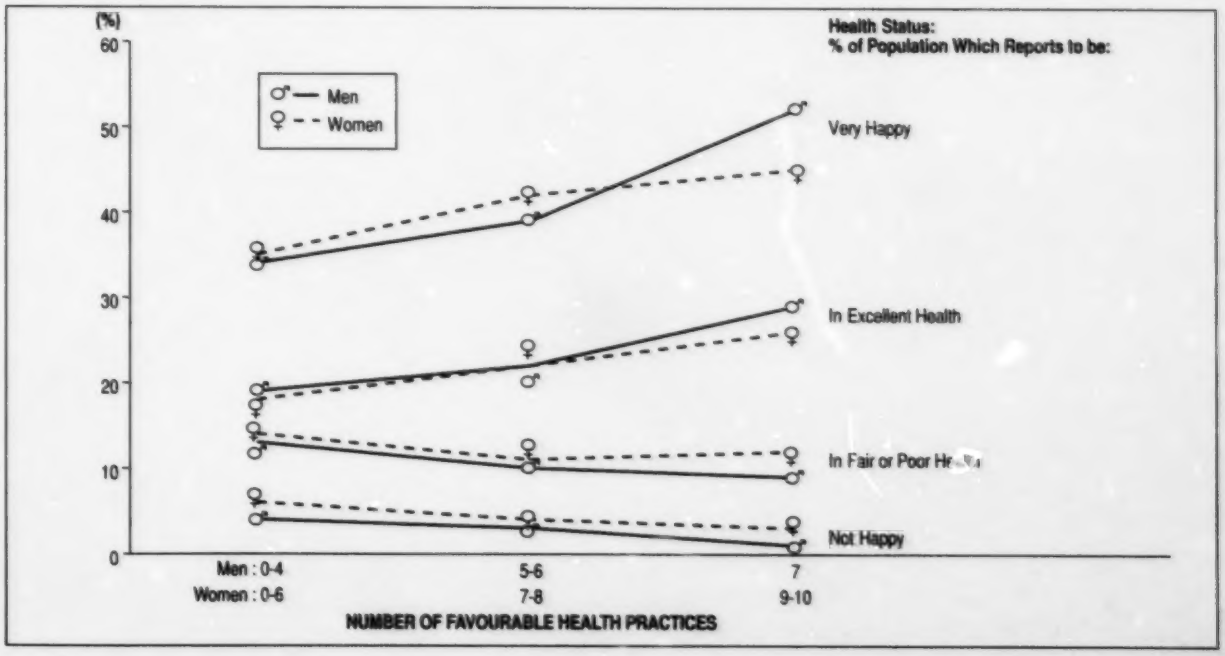
As shown in Figure C and Table 4, the number of good health practices is positively associated with self-assessed health status: those following a healthy lifestyle are more likely to rate their health as excellent and to describe themselves as very happy, compared to those whose lifestyle is less healthy overall. The converse is also true: those with a less healthy lifestyle are more likely to rate their health as fair or poor and to report that they are not too happy.

Discussion

These findings are consistent with earlier studies which used different health status measures and different health practices. For example, similar relationships were found in the Canada Health Survey, where the health measures were disability-days, number of health problems and two detailed psychological scales.[5] In Alameda County, California, health practices were found to relate to mortality over an extended period.[3] In neither study were the health practices the same or as numerous as in the present case.

Although the relationship between health practices and health status is a consistently positive one in the few populations where it has been examined, it is often impossible to conclude that the good practices are responsible for better health. This is true of the current results, which only describe a statistical association. The Alameda County study is significant because it showed that mortality by 1974 was related to health practices in 1965, even after controlling for initial health status. This is the

FIGURE C: **HEALTH STATUS, BY NUMBER OF FAVOURABLE HEALTH PRACTICES ADOPTED AND SEX, AGE 15+, CANADA, 1985**



clearest evidence available that multiple health practices have a significant impact on health status. It would be reasonable to presume that a similar relationship explains the findings in this chapter, although it is impossible to prove conclusively. More importantly, such a relationship implies that a substantial number of Canadian adults are at risk of premature death because of their lifestyle practices. This is not a novel conclusion,[8] but it bears repetition.

If health practices do have an important influence on health, this would help to explain socio-economic differentials in morbidity and mortality, an entrenched pattern in Canada[9] and in other countries. However, there is another plausible explanation, namely a sense of fatalism and of powerlessness which may develop in the face of firmly established patterns of illness. Probably there is some validity to both explanations, suggesting a vicious cycle from one generation to the next of hopelessness-poverty-illness-premature death-hopelessness. As noted in the introduction to this chapter, the focus on discretionary health practices is not meant to imply that they are the result of free and informed choice, thus "blaming the victim" for unfavourable health practices may be neither justified nor effective in promoting behaviour change.

This overview of health practices leads to three conclusions important for health promotion:

- good health practices are positively but weakly interrelated;
- a majority of Canadian adults claim to follow predominantly favourable practices, but healthy lifestyles are not evenly distributed in society; and
- good health practices are positively associated with good health status.

There are limitations in this approach to analysing health practices, however. By its nature, an index compresses considerable detail into a single score and much of this detail is important for developing health promotion policy and programs. For example, the smoking behaviour of young women is a crucial survey finding which is lost in this overview. For this reason, the chapters on individual health practices should be read in conjunction with this one.

Another limitation of this overview analysis is that it misses clusters of health practices which may vary from one age-sex group to another. For example, analysis of the Canada Health Survey and Canada Fitness Survey revealed two potentially lethal combinations of excessive risk: high alcohol consumption and low seatbelt use by youth, and high smoking and low exercise by middle-aged men.[5] Such combinations, found elsewhere in this report (e.g., Chapter 16) or obtained through further analysis, are important targets for health promotion. They should be sought out and applied within the context of the generally encouraging results reported in this chapter.

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TABLE 1: **AGE-ADJUSTED CORRELATIONS AMONGST FAVOURABLE HEALTH PRACTICES, AGE 15+, CANADA, 1985**

	Men (upper half) and Women (lower half)									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. BP check		.026	.026	.029	.005	.126*	.002	N/A	N/A	N/A
2. Exercise	-.013		.098*	.022	.008	.084*	.111*	N/A	N/A	N/A
3. Smoking	.030	.099*		.120*	.138*	.008	.156*	N/A	N/A	N/A
4. Drinking	.046*	.058*	.022		.112*	.071*	.097*	N/A	N/A	N/A
5. Illicit drugs	.061*	-.037*	.129	.069*		.083*	.046*	N/A	N/A	N/A
6. Fist aid kit	.018	.084*	-.015	.075*	.053*		.016	N/A	N/A	N/A
7. Breakfast	.011	.074*	.121*	.037*	.012	.046*		N/A	N/A	N/A
8. Breast exam	.278*	.030	.005	.069*	.071*	.099*	.002		N/A	N/A
9. BSE	.093*	.021	.041	.083*	.040*	.170*	.036*	.301*		N/A
10. Pap test	.092*	-.032	.117	.156*	.047*	.079*	.019	.350*	.288*	N/A

*$p < .001$
NOTE: All practices are coded so that favourable behaviour receives a higher score. See Table A for definitions.

TABLE 2: **AGE-ADJUSTED CORRELATIONS BETWEEN GOOD HEALTH PRACTICES AND MALE AND FEMALE HEALTH PRACTICE INDICES, AGE 15+, CANADA, 1985**

HEALTH PRACTICE	Health Practice Indexes	
	Men	Women
Blood pressure check	.350	.327
Exercise	.476	.370
Smoking	.517	.313
Drinking	.488	.408
Illicit drugs	.324	.234
First aid kit	.433	.417
Breakfast	.503	.380
Breast exam	–	.548
BSE	–	.526
Pap test	–	.454

– Not applicable to men
NOTE: Higher scores reflect greater adoption of favourable health practices. See Table A for definitions.

TABLE 3: **DISTRIBUTION OF POPULATION OVER FAVOURABLE HEALTH PRACTICES ADOPTED BY INDIVIDUALS, BY SEX, AGE AND EDUCATION, AGE 15+, CANADA, 1985**

		Number of Favourable Health Practices			
MEN	Population (000's)	% 0-2	% 3-4	% 5-6	% 7
Total 15+	9,623	4.5	28.0	53.4	14.1
AGE					
15-24	2,203	5.5	23.4	48.6	22.5
25-44	3,994	6.1	31.9	53.0	8.9
45-64	2,371	2.7*	29.8	55.6	11.9
65+	1,054	–	18.3	60.3	20.6
EDUCATION					
Elementary	3,458	3.9	33.4	51.6	11.0
Secondary	3,781	5.8	27.3	52.5	14.4
Post-secondary	2,312	3.4*	21.0	57.3	18.3
WOMEN		% 0-4	% 5-6	% 7-8	% 9-10
Total 15+	9,989	2.0	29.5	44.7	23.8
AGE					
15-24	2,130	3.6*	37.2	44.5	14.7
25-44	4,011	1.0*	26.9	46.3	25.7
45-64	2,456	2.7*	23.7	45.0	28.6
65+	1,392	–	35.2	39.8	23.9
EDUCATION					
Elementary	3,715	2.7	37.9	42.3	17.2
Secondary	4,090	2.3	27.7	45.3	24.7
Post-secondary	2,055	–	16.9	47.7	35.3

* high sampling variability
– not releasable
NOTE: Maximum number of favourable health practices in the index derived from the Canada Health Promotion Survey:
Men: 7, Women: 10 (includes additional practices of breast exam, breast self-exam and PAP test)

TABLE 4: **HEALTH STATUS BY NUMBER OF FAVOURABLE HEALTH PRACTICES ADOPTED, AGE 15+, CANADA, 1985**

		Among those with following health practices adopted:		
MEN	Population	0-4	5-6	7
Total 15+ (000's)	9,623	3,128	5,141	1,353
"Would you say your health is"				
% excellent	24.9	20.5	25.2	34.1
% very good	35.5	33.0	36.4	37.8
% good	28.0	31.5	33.3	19.8
% fair or poor	11.6	15.1	10.4	8.4
"In general, would you say you're"				
% very happy	40.8	34.5	40.9	55.3
% pretty happy	56.2	61.5	56.4	43.3
% not too happy	3.0	4.0	2.8	–
WOMEN		0-4	7-8	9-10
Total 15+ (000's)	9,989	3,144	4,464	2,381
"Would you say your health is"				
% excellent	25.0	20.3	25.4	30.5
% very good	36.2	35.7	36.5	36.3
% good	25.7	27.4	27.1	21.0
% fair or poor	12.9	16.3	11.0	12.1
"In general, would you say you're"				
% very happy	42.9	35.9	44.0	50.3
% pretty happy	52.1	56.1	52.1	46.8
% not too happy	4.6	6.9	3.8	2.9*

* high sampling variability
– not releaseable

14

Health Status

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Highlights

- Nearly nine out of ten Canadians assess their health to be good, very good or excellent, compared to the health of others their age. Just over one in ten persons reports either fair or poor health.
- Older Canadians are more likely to report poorer health. Below age 45, fewer than one in ten persons report that they are in fair or poor health; this number reaches nearly three in ten in the 65 and over age group.
- Upper-income Canadians enjoy better health. In the highest household income quintile, just one in twenty persons reports fair or poor health status, compared to one in five (21.1%) in the lowest income quintile.
- Non-smokers are more likely to report excellent health than smokers. Non-smokers aged 15-24 are more than twice as likely to report excellent health than cigarette smokers of the same age.
- Obese Canadian adults are twice as likely to report fair or poor health than persons in the normal weight range.
- Over three million adult Canadians (16%) report the presence of a long-term activity limitation that restricts their ability to perform activities at work, working around the home or leisure activities.
- Those with a long-term activity limitation are nearly six times as likely (39%) to report fair or poor health status than those without a limitation (7%).
- More than nine out of ten Canadians (96%) report that they are generally "very happy" or "pretty happy".
- Higher income Canadians tend to be happier than those with lower incomes.
- Those who report having a lot of friends tend to be happier than those with fewer friends.
- Happiness is related to self-reported health status. One in two people reporting excellent health considers him or herself to be very happy, compared to one in five of those in poor health.
- Canadians who feel that their lives are "not at all stressful" are twice as likely to report being very happy than those who feel that their lives are "very stressful".

* The views expressed in this report are those of the author and not necessarily those of Statistics Canada.

Introduction

This chapter examines the levels and correlates of three health status indicators. The first of these is a measure of overall self-reported health. Respondents were asked: "In general, compared to other persons your age would you say your health is . . . excellent, very good, good, fair or poor?" (Q. 1).

The second indicator is intended to determine whether or not the respondent has a long-term "activity limitation" or disability. Respondents were asked, "Are you limited in the kind or amount of activity you can do because of a long term physical condition or health problem? By long term I mean a condition that has lasted or is expected to last more than six months" (Q. 16). Those respondents who indicated that they did have an activity limitation were further asked more specifically: "Are your activities limited . . . at home, at work or school, or in other activities such as, leisure-time pursuits or transportation to or from work?" (Q. 17). Thus it might be possible for a respondent to report limited activity in all three categories. For the purposes of this chapter, these two questions have been combined into one variable with the following categories: no limitation, limited only at home, limited only at work or school, limited only at "other" activities, limited in two or more activities, and type of limitation not stated.

While the first two indicators may reflect a wide array of health-related problems or conditions, the third is probably more specific to emotional health status. Respondents were asked: "In general, would you say you're . . . very happy, pretty happy or not too happy?" (Q. 9).

While these indicators are subjective in nature, each has been used previously in national household surveys in Canada and the United States.[1,2,3,4] Numerous attempts have been made in these and other smaller surveys to assess their validity, often in terms of their ability to predict other specific health outcomes. Self-reported health status, for example, has been found to be highly correlated with the presence of specific health problems[5] and has been found to be a predictor of health care utilization[6] and mortality.[7,8] Activity limitation data are an important measure of the consequences of illnesses for the ability to carry out daily activities and to fulfill social roles and obligations, and these have formed the basis of several studies of health status trends in Canada and the United States.[9,10,11,12,13]

The correlates examined include the demographic characteristics of age, sex and marital status, income, and certain health and lifestyle variables. In addition, an attempt is made to examine self-reported health and happiness in relation to social support, the latter being measured in terms of the respondent's number of friends and the perceived closeness to them.

One limitation in the following analyses is that the sample size does not permit finer age breakdowns in the 65 and over group. Other studies have found that health status and medical care utilization vary widely within this age range.[10,14] Also, the reader should note that, in the interests of providing accurate population estimates, the data are not standardized for such variables as age, sex and education when presenting, for example, interprovincial comparisons. This lack of standardization is not likely to have much impact, however, as explained in Appendix A.

Self-assessed health status

Population patterns

Nearly nine out of ten Canadians (88%) report their health to be good, very good or excellent, compared to the health of others their age (Table 1). "Very good" health is reported most frequently (36%) and one out of four persons enjoys excellent health. Just over one in ten persons reports either fair or poor health (12%). Overall, there is very little difference between men and women in the level of health status.

Wide variations in the level of health are evident across age categories. Below age 45, fewer than one in ten Canadians report that they are in fair or poor health; this number increases to two in ten in the 45-64 age group, reaching nearly three in ten at age 65 and over. Sex differences in self-reported health status become evident with advancing age, with 29% of women aged 65 and over reporting fair or poor health, compared to 24% of men. Women in the 25-44 age range and men aged 25-34 are the groups most likely to report excellent health (Table 1 and Figure A).

It has been found in previous studies that mortality rates are lowest among the married population, followed by the never-married population.[16] Much higher mortality rates have been observed among the widowed and divorced populations. Moreover there is a greater marital status differential for men than for women. One explanation that is frequently advanced for such findings is that marital status is a measure of social integration, thus those who are married are more likely to have a group of family and friends with whom they regularly interact. Table 2 examines the relationship between marital status and self-assessed health.

There are very small differences in health status for either men or women between the married, never-married and separated/divorced categories. The never-married group is the least likely to report fair or poor health status, a finding that is likely explained by the younger age of this group. Those who are widowed are twice as likely to report fair or poor health status as the total population and age quite likely accounts for a significant part of this variation. The sex difference in health status is widest in the widowed population, with nearly three in ten widows reporting fair or poor health status, compared to two in ten widowers.

Table 3 examines provincial variations in self-assessed health status. Better health is generally reported in central and western Canada. Fair or poor health is most likely to be reported in New Brunswick (17%) and Nova Scotia (16%), followed by Saskatchewan (14%), the latter province being an exception to the general trend. While Quebec has the fourth highest proportion of its population reporting fair or poor health, it has the highest proportion of its population reporting excellent health (30%).

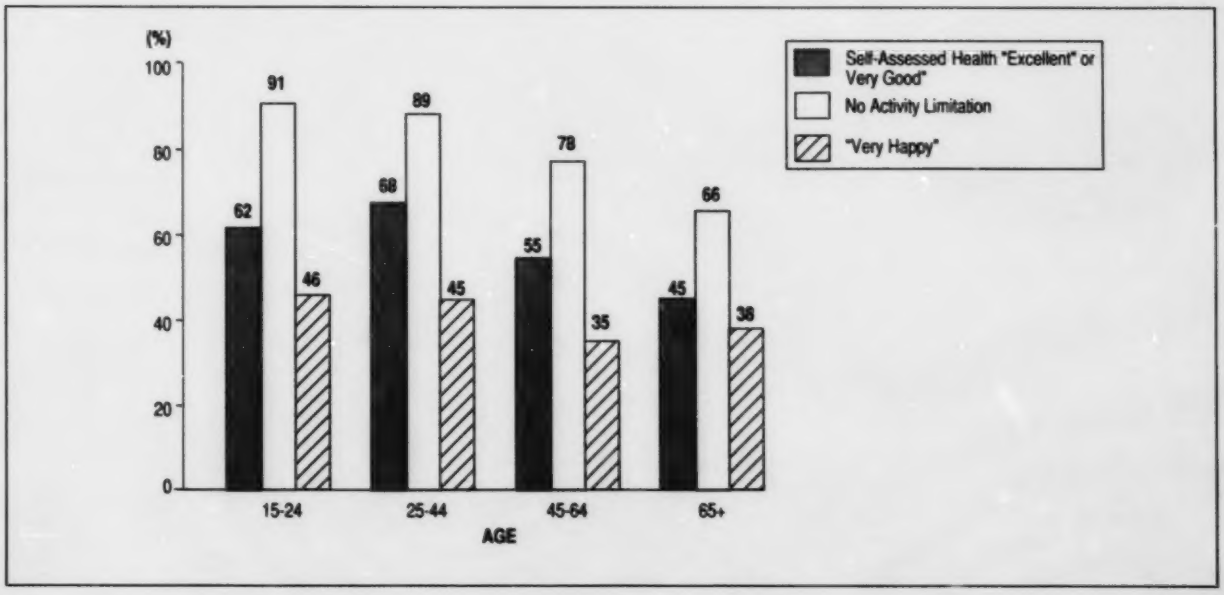
Although the level of health has increased greatly in most industrialized countries during this century, considerable research has shown that persistent social inequalities, whether measured by income, occupation or education remain,[17] and in some cases, have grown wider. Canadian studies have shown that level of income is positively correlated with both measures of health status and longevity.[10,18] Table 4 examines the relationship between health status and income quintiles across age groups.

Health status clearly increases with the level of income. In the highest income quintile just one in twenty persons reports fair or poor health, compared to one in five in the lowest income quintile. To some extent this finding is accounted for by the greater likelihood of older persons (65 and over) to have lower income; at 36% they are heavily over-represented in the lowest income quintile. However, when these findings are examined by age group, the relationship between income and health status remains as strong. It must be emphasized, however, that the direction of causation cannot be inferred from these cross-sectional data. While higher incomes may result in better living conditions that lead to better health, it may also be the case that poor health status reduces one's ability to work and earn income.

Smoking and weight

In the total population, current cigarette smokers are somewhat less likely to report excellent health than non-smokers (21% vs. 27%) (Table 5). The

FIGURE A: **PERCENTAGE OF POPULATION WITH SELECTED HEALTH STATUS CONDITIONS, BY AGE, AGE 15+, CANADA, 1985**



largest differences in self-assessed health status between smokers and non-smokers are observed in the youngest and oldest age groups.

Non-smokers aged 15-24 are more than twice as likely (29%) to report excellent health status than current cigarette smokers of the same age (13%). At the older ages, current cigarette smokers are more likely to report poorer health, smokers aged 65 and over being more than twice as likely to report poor health than non-smokers (15% vs. 7%, data not shown). The concentration of such a difference at the older ages would appear to suggest that the relationship between poor health and smoking develops over a lifetime.

Table 6 examines health status in relation to the Body Mass Index. Discussed in greater detail in Chapter 11, the purpose of this index is to classify a person's weight in relation to height. Previous longitudinal research has established that persons in extreme categories of either underweight or overweight are at excess risk of mortality, with the greatest excess risk observed in the overweight category.[19] This same pattern with respect to self-assessed health status is shown in Table 6. Overall, overweight persons are twice as likely (20%) to report fair or poor health status than persons in the acceptable weight range (10%). This relationship holds at every age and is strongest for the 25-44 age group. At age 45 and older, those who are underweight are also more likely than those of acceptable weight to report fair or poor health. The fact that the greatest excess risk of poorer health among overweight and underweight persons is observed in the older age groups would appear to suggest that this relationship develops over a long period of time.

Efforts to improve health

Respondents were asked: "What is the single most important thing you have done in the past year to improve your health?" (Q. 106) The majority of the population in every health status category reports some effort to improve their health during the year preceding the survey (Table 7). Those in poor health are 7% more likely to report doing "nothing" to improve their health than those in excellent health. Those who are in poor health are likely to be limited in their ability to make efforts to improve their health. This is suggested by the types of efforts made to improve health status. Nearly one in three persons in excellent or very good health reports increased exercise, compared to fewer than one in five of those in fair or poor health. Those in poor health (23%) are much more likely to have sought medical treatment as a means of improving their health status than the population as a whole (4%). Across successive age categories, there is a steady increase in the proportion reporting that they did nothing to improve their health, ranging from 26% in the 15-24 group to 52% in the 65 and over age group (data not shown). This difference is due mainly to the lower likelihood of the oldest age group to report increased exercise.

Activity limitation

The assessment of "activity limitation" in the Health Promotion Survey attempted to determine the extent to which health-related problems limit the ability to perform "major" activities of daily life, thus providing estimates of the prevalence of long-term disability in the population.

Population patterns

Table 8 examines activity limitation by age and sex. The likelihood of having an activity limitation increases steadily after age 35, reaching one in three Canadians aged 65 and over (Figure A). Men and women are equally likely to report an activity limitation in each age group until age 54, when the sex differences become greater. Three out of every ten Canadian men aged 65 and over have some degree of activity limitation (31%) in comparison to nearly four out of ten women (37%). Persons aged 65 and over also tend to report a greater degree of activity limitation, with one in five Canadians in this age group reporting a limitation in two or more activities.

Activity limitation and self-assessed health status

There is a strong relationship between activity limitation and self-reported health status (Table A). Those with a long-term activity limitation are nearly six times as likely to report fair or poor health than those without an activity limitation. The difference is even more pronounced in the population reporting a limitation in two or more activities; nearly one out of four of this group report poor health in comparison with fewer than one in one hundred of the population with no activity limitation. Those who are limited in two or more activities are the least likely to report excellent health, at 7%, compared to 28% of the population with no activity limitation.

Emotional health

Emotional or mental health is measured in the Health Promotion Survey with a single question assessing the respondent's general condition of being "very happy" or "not too happy".

Population patterns

Virtually all adult Canadians (96%) report that they are generally "very happy" or "pretty happy" with just under 4% reporting that they are "not too happy" (Table 9). The level of happiness tends to decline with age, with 8% more of persons aged 15-24 reporting that they are very happy compared to those aged 65 and over (Figure A). Those aged 65 and over are more than three times as likely to report being not too happy as those aged 15-24, although this number remains fewer than one in ten. The sex differences on this measure are small, and the largest are observed at both ends of the age range. In the 15-24 group, women are 7% more likely to be very happy than men, while, in the 65 and over group, men are 7% more likely to be very happy. Women over the age of 65 are more likely (9%) to report that they are not too happy than any other age-sex group.

There is a clear positive relationship between reported happiness and income. One in two persons in the highest income quintile (51%) reports being very happy, compared to one in three in the lowest quintile (33%). Those in the lowest quintile are from three to seven times as likely to report themselves as being not too happy than any other income group, although this number remains small (6%) (Table 9).

Although previous research has found that there is a declining trend in health status measures from married to never-married to widowed and divorced categories, Table 10 shows that the happiness question clearly divides the population into two groups. More than four out of ten married and never-married persons report being very happy, compared to fewer than three out of ten widowed, separated and divorced persons. Those in the latter category are nearly four times as likely to report themselves as not too happy than those who are married or never-married. Across marital status categories, women are somewhat more likely than men to report being very happy in each marital status, with the exception of the separated/divorced category.

Social support

Marital status is often interpreted as a form of social support. A more explicit measure may be constructed from two items in the questionnaire dealing with social relationships. The first, Q. 66, asked: "About how many people, including relatives, do you consider to be your friends, that is, people you see socially on a regular basis?" Responses were categorized as 0-8/9-19/20+ friends. Q. 71 asked: "How many do you consider to be your close friends, that is people you could talk to if you needed help or had a problem?" Responses were grouped as follows: none or few ("few" in Table 10) and half or more ("most" in Table 10).

There is a positive relationship between number of friends and level of happiness. Overall, nearly one in two persons reporting 20 or more friends (47%) considers him/herself to be very happy. This figure is 13% higher than those with eight or fewer friends (Table 10).

Number of friends seems to be more important than the proportion of one's social network considered "close". Overall, those who regard most acquaintances as close friends are only 5% more likely to be very happy than those with no close friends. However, there is a substantial (10%) difference in favour of those with 20 or more friends when most are considered close.

TABLE A. **DISTRIBUTION OF POPULATION OVER SELF-ASSESSED HEALTH STATUS, BY ACTIVITY LIMITATION, AGE 15+, CANADA, 1985**

		Among those with the following activity limitation:						
	Total	No Limitation	Some Limitation	Limited at Home	Limited at Work/ School	Limited at Other	Limited in 2 or more Activities	Type of Limitation Not Stated
Population (000's)	19,611	16,423	3,188	345	102	804	1,495	397
HEALTH STATUS								
% Excellent	25.0	28.1	8.8	7.6*	21.4*	12.7	6.5	7.9*
% Very Good	35.8	38.5	21.3	20.5	20.5*	25.8	17.2	28.7
% Good	26.9	26.3	30.2	19.1*	20.3*	39.4	24.9	43.6
% Fair	9.3	6.4	24.4	30.7	33.7*	20.0	26.6	17.1*
% Poor	3.0	0.6	15.2	22.0	–	–	24.8	–

* high sampling variability
– not releasable

Other health status measures

Several studies have shown that health status is a major determinant of the overall quality of life. This finding is reflected in the positive relationship between the level of general happiness and self-assessed health status (Table B). Three in ten persons who report being in poor health status also consider themselves to be "not too happy", compared to fewer than four in one hundred in the total population. Conversely, more than one in two persons reporting excellent health (56%) report being "very happy", compared to one in five (21%) of those in poor health.

A similar result is observed for the relationship between happiness and activity limitation, although the differences are not as extreme (Table C). Forty-four per cent of those with no activity limitation report being very happy in comparison with 30% of those with some form of activity limitation. Those who are limited in activities at home are the most likely to report being not too happy, at one in five (19%).

Exposure to stress

In recent years, the concept of stress, a term applied to the complexity and rapid pace and change associated with modern living, has been implicated in a wide variety of health-related problems. In the Health Promotion Survey, respondents were asked (Q. 10): "Would you describe your life as very stressful, fairly stressful, not very stressful or not at all stressful?".

Table 11 shows that the population is divided fairly evenly between stressful and not stressful categories. Fewer than one in ten Canadians believes that his or her life is very stressful.

A strong negative relationship is observed between stress and the level of happiness (Table 11). Fifteen percent of those whose lives are very stressful report that they are not too happy, compared to less than 2% of those whose lives are not at all stressful. Conversely, those whose lives are "not at all stressful" are twice as likely to report being very happy (62%) than those whose lives are very stressful

TABLE B: **DISTRIBUTION OF POPULATION OVER SELF-REPORTED LEVEL OF HAPPINESS, BY SELF-ASSESSED HEALTH STATUS, AGE 15+, CANADA, 1985**

		Among those who assess their health to be:				
	Total	Excellent	Very Good	Good	Fair	Poor
Population (000's)	19,611	4,896	7,024	5,268	1,826	583
LEVEL OF HAPPINESS						
% Very Happy	41.9	55.8	46.7	31.8	22.1	20.7
% Pretty Happy	54.1	42.9	50.7	64.6	69.0	49.0
% Not Too Happy	3.8	1.2*	2.3	3.5	8.8	30.3

* high sampling variability

TABLE C: **DISTRIBUTION OF POPULATION OVER SELF-REPORTED LEVEL OF HAPPINESS, BY ACTIVITY LIMITATION, AGE 15+, CANADA, 1985**

		Among those with the following activity limitation:						
	Total	No Limitation	Some Limitation	Limited at Home	Limited at Work/ School	Limited at Other	Limited in 2 or more Activities	Type of Limitation Not Stated
Population (000's)	19,611	16,423	3,143	345	102	804	1,495	397
LEVEL OF HAPPINESS								
% Very Happy	41.9	44.3	29.7	25.2	19.8*	39.7	25.0	33.5
% Pretty Happy	54.1	53.0	60.4	55.8	76.3	55.4	62.6	62.0
% Not Too Happy	3.8	2.6	9.9	19.0	–	4.9*	12.3	–

* high sampling variability
– not releasable

(33%). There is also a negative relationship between the level of perceived stress and self-reported health status. Those with "very stressful" lives are nearly twice as likely to be in fair or poor health (20%) than those whose lives are "not at all stressful" (12%).

Discussion

Comparison with other sources

Although the presence of an activity limitation was determined through a more extensive series of questions in the Canada Health Survey,[3] the approach to measurement used in both that survey and the Health Promotion Survey are similar, thus permitting a comparison (Table 12).

There has been a small overall increase in the proportion of the population reporting an activity limitation since 1978/79. This increase has been observed mainly among women, particularly those at younger ages. The largest increase for any age-sex group is among females aged 35-44, rising from just over one in ten in 1978 to nearly one in five in 1985. In contrast, the largest changes observed among men are decreases in the 55-64 and 65 and over age groups. Nearly one in ten fewer Canadian men aged 65 and over reported an activity limitation in 1985 than in 1978.

A comparison with the 1983 United States National Health Interview Survey[2] suggests that Canadians are slightly less likely to report an activity limitation than Americans. Nearly 18% of Americans aged 18 and over reported an activity limitation in 1983; among those aged 65 and over this figure reached 40%.

The happiness question on the present survey is very similar to one asked in the 1978/79 Canada Health Survey.[3] At that time, the majority of the population aged 15 and over considered themselves either very or pretty happy (80%) while one in ten persons (9%) was not too happy. A further 7% of respondents did not provide an answer to this question. Thus a comparison with the Health Promotion Survey suggests that Canadians are somewhat more likely to report being happy in 1985, although it cannot be concluded that this represents a declining trend without additional data.

While an examination of these three indicators of health status suggests that a majority of Canadians enjoy good health, it is also clear that challenges remain for health planning and programming in the next decades.

Challenges

First, it appears that a marked social inequality in health status remains in Canada, as it does in other countries, as suggested by the strong relationship between household income quintile and self-assessed health status which is independent of age.

Second, there remain discrepancies in health status between the provinces. Although income levels may account for some of these differences, there are undoubtedly other contributing factors that are not readily explained.

Table 13 presents interprovincial comparisons for other summary health measures: life expectancy at birth;[20] the percentage of the total population with a long-term activity limitation,[21] from the Canada Health Survey; and the percentage of the population 15 and over with a disability, from the Canadian Health and Disability Survey 1983-1984.[22] While there are some exceptions, these other indicators reflect the same regional pattern as that shown by self-assessed health status.[23] The incorporation of life expectancy brings out two interesting differences. Saskatchewan ranked third for both male and female life expectancy in 1981 but has a higher proportion of its population reporting a disability and also fair or poor health status. Conversely, Quebec had, in 1981, an average life expectancy for males and females lower than the national figures and yet it tends to have a lower proportion of its population with an activity limitation or physical disability.

Third, health promotion will have to broaden its conceptual foundation. Risk reduction will continue to be appropriate and important, judging by the findings in this chapter on self-rated health status related to smoking and to weight (and, in Chapter 12, to exercise).

However, the concepts of stress and social support, measured as crudely as they were in this survey, also have obvious relevance to health status and must be included in a health promotion strategy which hopes to influence positively the health status of the population.

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TABLE 1: **SELF-ASSESSED HEALTH STATUS, BY AGE AND SEX, AGE 15+, CANADA, 1985**

		"In general, compared to other persons your age would you say your health is:"				
	Population (000's)	Excellent %	Very Good %	Good %	Fair %	Poor %
Total 15+	19,611	25.0	35.8	26.9	9.3	3.0
Men	9,623	24.9	35.5	28.0	8.8	2.8
Women	9,989	25.0	36.2	25.7	9.8	3.2
AGE						
15-24	4,333	23.2	38.7	32.2	5.5	–
M	2,203	22.9	39.4	32.7	4.8	–
W	2,130	23.6	38.0	31.6	6.3	–
25-34	4,476	30.6	39.5	22.8	6.2	0.8*
M	2,225	31.2	36.8	24.7	6.8	–
W	2,250	30.1	42.2	21.0	5.6	1.0*
35-44	3,529	25.2	41.3	25.9	6.6	1.0*
M	1,769	19.7	44.0	29.8	5.2	1.3*
W	1,760	30.7	38.5	22.0	8.0	–
45-54	2,520	26.9	33.1	22.7	12.3	4.9
M	1,263	27.4	30.0	24.5	13.3	4.9*
W	1,257	26.5	36.3	20.9	11.3	5.0*
55-64	2,306	20.4	28.4	29.7	14.1	7.1
M	1,108	23.2	24.9	29.6	13.5	8.9
W	1,199	17.9	31.6	29.8	14.6	5.5*
65+	2,446	19.7	25.8	27.9	18.1	8.4
M	1,054	23.5	27.6	25.3	17.6	6.0*
W	1,392	16.8	24.5	29.9	18.5	10.3

* high sampling variability
– not releasable

TABLE 2: **SELF-ASSESSED HEALTH STATUS, BY MARITAL STATUS AND SEX, AGE 15+, CANADA, 1985**

	Population (000's)	"In general, compared to other persons your age would you say your health is:" Excellent %	Very Good %	Good %	Fair %	Poor %
Total 15+	19,611	25.0	35.8	26.9	9.3	3.0
Men	9,623	24.9	35.5	28.0	8.8	2.8
Women	9,989	25.0	36.2	25.7	9.8	3.2
MARITAL STATUS						
Married	12,074	25.3	36.1	25.6	9.7	3.2
M	5,984	24.2	34.9	27.3	10.1	3.6
W	6,089	26.4	37.3	23.9	9.4	2.9
Single	5,327	24.5	38.0	29.7	6.5	1.3*
M	2,972	25.1	37.4	30.8	5.5	1.3*
W	2,354	23.9	38.7	28.3	7.7	1.4*
Widowed	1,189	22.1	25.6	26.9	17.1	8.2
M	247	33.0	26.7	22.3*	13.9*	–
W	943	19.3	25.3	28.2	18.0	9.2
Separated/Divorced	1,017	26.6	33.4	27.0	10.3	2.7*
M	418	29.4	35.1	22.5	12.1*	–
W	599	24.6	32.3	30.1	9.0*	4.0*

* high sampling variability
– not releasable

TABLE 3: **SELF-ASSESSED HEALTH STATUS, BY PROVINCE, AGE 15+, CANADA, 1985**

	Population (000's)	"In general, compared to other persons your age would you say your health is:" Excellent %	Very Good %	Good %	Fair %	Poor %
Canada	19,611	25.0	35.8	26.9	9.3	3.0
Newfoundland	423	20.6	43.3	24.4	8.5	3.2*
P.E.I.	96	18.8	43.7	25.8	9.7	2.0*
Nova Scotia	681	16.4	37.9	29.8	13.0	2.9*
New Brunswick	544	19.0	32.9	31.2	13.5	3.3*
Quebec	5,148	30.1	32.9	23.6	9.7	3.8*
Ontario	7,096	24.7	37.3	26.9	8.3	2.8*
Manitoba	818	21.3	36.3	30.5	9.6	2.2*
Saskatchewan	759	18.1	37.6	30.2	11.5	2.6*
Alberta	1,762	22.3	38.1	27.7	8.5	3.2
B.C.	2,267	25.0	33.5	29.8	9.5	2.0*
Yukon	17	26.0	37.4	28.7	5.7	–

* high sampling variability
– not releasable

TABLE 4: **SELF-ASSESSED HEALTH STATUS, BY INCOME AND AGE, AGE 15+, CANADA, 1985**

		Population (000's)	"In general, compared to other persons your age would you say your health is:" Excellent %	Very Good %	Good %	Fair %	Poor %
Total 15+		19,611	25.0	35.8	26.9	9.3	3.0
	15-24	4,333	23.3	38.7	32.2	5.5	–
	25-44	8,005	28.2	40.3	24.2	6.4	0.9*
	45-64	4,827	23.8	30.9	26.1	13.1	6.0
	65+	2,446	19.7	25.8	27.9	18.1	8.4
INCOME QUINTILE							
Lowest	Total	2,826	18.7	29.5	30.6	14.4	6.7
	15-24	612	25.0	33.3	34.5	6.5*	–
	25-44	723	21.1	36.7	27.7	11.6	–
	45-64	626	12.7	24.2	31.7	16.2	15.3
	65+	865	16.8	24.8	29.5	20.9	8.1*
Second	Total	2,437	23.1	40.3	27.0	6.8	2.8*
	15-24	357	18.4*	51.4	23.1	7.1*	–
	25-44	1,186	25.7	43.5	25.4	4.7*	–
	45-64	666	20.9	30.6	34.1	8.8*	5.6*
	65+	228	23.8*	34.1	20.0*	11.9*	10.2*
Third	Total	2,614	26.5	39.4	23.1	10.3	–
	15-24	350	28.4	43.0	24.5	–	–
	25-44	1,527	26.9	40.9	22.0	9.5	–
	45-64	643	26.2	34.9	22.5	15.4	–
	65+	95	–	31.3*	41.0*	–	–
Fourth	Total	2,179	28.4	34.5	29.2	5.4	2.4*
	15-24	349	26.5	22.8	46.5	–	–
	25-44	1,347	28.8	38.2	28.4	4.1*	–
	45-64	417	28.1	32.8	17.1	11.4*	10.6*
	65+	67	33.0*	31.8*	30.2*	–	–
Highest	Total	2,513	30.4	43.6	21.1	3.8*	1.1*
	15-24	348	22.7	51.9	20.2	–	–
	25-44	1,433	31.3	45.9	19.2	2.6*	–
	45-64	673	31.6	34.0	27.0	6.5*	–
	65+	59	37.3*	50.7*	–	–	–
Don't Know/ Not Stated	Total	7,042	24.5	33.1	28.0	11.0	3.2
	15-24	2,317	22.3	37.9	33.7	5.7	–
	25-44	1,790	30.9	36.2	24.6	7.4	–
	45-64	1,802	24.0	30.2	24.1	15.8	5.5
	65+	1,133	19.8	22.9	28.1	19.7	9.5

* high sampling variability
– not releasable

TABLE 5: **SELF-ASSESSED HEALTH STATUS, BY SMOKING BEHAVIOUR AND AGE, AGE 15+, CANADA, 1985**

	Population (000's)	"In general, compared to other persons your age would you say your health is:" Excellent %	Very Good %	Good %	Fair or Poor %
SMOKERS					
Total 15+	6,630	20.8	34.7	30.2	14.3
15-24	1,526	12.9	36.0	43.3	7.8
25-44	3,058	25.3	38.2	27.2	9.4
45-64	1,589	21.1	30.0	23.4	25.5
65+	458	15.8	23.8	30.0	30.5
NON-SMOKERS					
Total 15+	12,942	27.2	36.3	25.2	11.3
15-24	2,804	28.9	40.1	26.1	4.9
25-44	4,920	30.2	41.3	22.4	6.0
45-64	3,230	25.2	31.3	27.4	16.1
65+	1,988	20.6	26.3	27.4	25.7

TABLE 6: **SELF-ASSESSED HEALTH STATUS, BY BODY WEIGHT-FOR-HEIGHT AND AGE, AGE 20+, CANADA, 1985**

	Population (000's)	"In general, compared to other persons your age would you say your health is:" Excellent %	Very Good %	Good %	Fair or Poor %
Total 20+	17,654	25.6	35.1	26.4	12.9
Underweight	2,418	27.7	34.4	22.9	15.0
Acceptable Weight	9,354	27.1	37.0	25.5	10.2
Possibly Overweight	2,690	26.4	31.0	30.2	12.5
Overweight	2,976	17.7	33.1	29.1	20.0
AGE					
20-24	2,376	26.4	35.5	33.1	5.1
Underweight	597	27.1	33.9	34.2	4.8*
Acceptable Weight	1,400	29.0	36.4	30.0	4.6*
Possibly Overweight	174	25.1*	23.9*	43.2	–
Overweight	198	–	42.6	43.5	–
25-44	8,005	28.2	40.3	24.2	7.2
Underweight	1,167	31.9	42.2	19.3	6.5*
Acceptable Weight	4,485	30.0	40.4	23.3	6.2
Possibly Overweight	1,050	26.8	39.6	28.4	5.2*
Overweight	1,177	19.2	37.5	29.5	13.7
45-64	4,827	23.8	30.9	26.0	19.1
Underweight	370	30.3	22.8	10.7*	36.2
Acceptable Weight	2,237	23.7	34.9	26.1	15.3
Possibly Overweight	1,036	25.6	27.1	31.8	15.5
Overweight	1,119	18.9	30.0	26.3	24.8
65+	2,446	19.7	25.8	27.9	26.6
Underweight	284	8.3*	18.4*	29.7	43.6
Acceptable Weight	1,232	20.7	29.4	28.0	21.9
Possibly Overweight	429	27.7	21.8	25.7	24.8
Overweight	483	15.9	25.5	28.9	29.7

* high sampling variability
– not releasable

TABLE 7: "WHAT IS THE SINGLE MOST IMPORTANT THING YOU HAVE DONE IN THE PAST YEAR TO IMPROVE YOU HEALTH?", BY SELF-ASSESSED HEALTH STATUS, AGE 15+, CANADA, 1985

		Among those who felt their health status was:				
	Total	Excellent %	Very Good %	Good %	Fair %	Poor %
Population (000's)	19,611	4,896	7,024	5,268	1,826	583
"MOST IMPORTANT THING DONE LAST YEAR TO IMPROVE HEALTH"						
Nothing	37.1	35.8	34.7	40.5	38.3	42.2
Increased Exercise	29.1	30.1	34.6	25.9	21.7	6.0*
Lost Weight	4.0	3.5	4.0	4.8	3.9*	–
Improved Eating Habits	11.6	13.5	11.9	10.8	8.6	7.5*
Quit/Reduced Smoking	3.9	4.4	3.5	4.5	3.0	–
Reduced Drug Use	0.3*	–	–	0.5*	–	–
Drank Less	1.0	0.7*	0.8*	1.3*	2.2*	–
Had Blood Pressure Checked	0.6	–	0.5*	0.8*	–	3.9*
Tried to Control B.P.	0.5	0.6*	0.4*	0.5*	–	–
Learned to Manage Stress	0.6	0.5*	0.7*	0.7*	–	–
Reduced Stress Level	0.7	0.7*	0.5*	0.6*	–	–
Received Medical Treatment	3.6	1.8	2.7	2.4	8.7	23.2
Other	5.9	6.3	5.1	5.3	9.3	7.9*
Not Stated	1.2	1.7*	0.5*	1.5*	1.7*	–

* high sampling variability
– not releasable

TABLE 8: **DISTRIBUTION OF POPULATION OVER ACTIVITY LIMITATION, BY SEX AND AGE, AGE 15+, CANADA, 1985**

	Population (000's)	Not Limited %	Some Limitation %	Limited in one Activity %	Limited in 2+ Activity %	Type of Limitation not Stated %
Total 15+	19,611	83.7	16.0	6.4	7.6	2.0
Men	9,623	86.4	13.5	5.2	6.1	2.2
Women	9,989	81.2	18.4	7.5	9.1	1.9
AGE						
15-24	4,333	91.4	8.5	4.0	3.2	1.3*
M	2,203	93.3	6.5	3.4*	2.1*	1.0*
W	2,130	89.4	10.5	4.5	4.4	1.6*
25-34	4,476	90.6	8.7	4.6	2.8	1.3*
M	2,225	92.1	7.8	3.8	2.7*	1.4*
W	2,250	89.2	9.6	5.5	2.9*	1.2*
35-44	3,529	86.1	13.9	6.4	5.3	2.1*
M	1,769	90.1	9.9	3.4*	4.3*	2.2*
W	1,760	82.1	17.8	9.5	6.3	2.1*
45-54	2,520	83.6	16.3	5.9	8.4	2.0*
M	1,263	83.0	16.8	4.9*	9.0	2.9*
W	1,257	84.3	15.7	6.8	7.8	–
55-64	2,306	71.6	28.1	9.3	15.3	3.5
M	1,108	75.3	24.7	9.7	11.8	3.1*
W	1,199	68.1	31.3	8.9	18.5	3.8*
65+	2,446	65.7	34.2	11.5	19.6	3.1*
M	1,054	69.4	30.5	10.4	15.7	4.4*
W	1,392	62.9	37.1	12.4	22.6	2.1*

* high sampling variability
– not releasable

TABLE 9: **DISTRIBUTION OF POPULATION OVER SELF-REPORTED LEVEL OF HAPPINESS, BY SEX, AGE, AND INCOME, AGE 15+, CANADA, 1985**

	Population (000's)	Very Happy %	Pretty Happy %	Not too Happy %
Total 15+	19,611	41.9	54.1	3.8
Men	9,623	40.8	56.2	3.0
Women	9,989	42.9	52.1	4.6
AGE				
15-24	4,333	46.0	51.9	2.1
M	2,203	42.8	56.0	1.2*
W	2,130	49.3	47.6	3.0*
25-44	8,005	45.0	52.2	2.5
M	3,994	43.1	54.4	2.5
W	4,011	46.9	49.9	2.5
45-64	4,827	35.0	59.2	5.6
M	2,371	34.6	61.1	4.3
W	2,456	35.3	57.5	6.9
65+	2,446	38.1	54.5	7.5
M	1,054	41.7	52.6	5.7*
W	1,392	35.3	55.9	8.8
INCOME QUINTILE				
Lowest	2,826	33.3	60.8	5.9
Second	2,437	40.9	55.9	3.2*
Third	2,614	44.3	53.6	1.3*
Fourth	2,179	41.8	55.8	2.4*
Highest	2,513	50.9	48.0	1.0*
Don't Know/Not Stated	7,042	41.6	52.7	5.5

* high sampling variability

TABLE 10: **DISTRIBUTION OF POPULATION OVER SELF-REPORTED LEVEL OF HAPPINESS, BY MARITAL STATUS AND NUMBER OF CLOSE FRIENDS, AGE 15+, CANADA, 1985**

	Population (000's)	Very Happy %	Pretty Happy %	Not too Happy %
Total 15+	19,611	41.9	54.1	3.8
Men	9,623	40.8	56.2	3.0
Women	9,989	42.9	52.1	4.6
MARITAL STATUS				
Married	12,074	45.2	51.8	2.8
M	5,984	43.3	54.3	2.4
W	6,089	47.0	49.3	3.2
Single	5,327	40.6	56.4	2.9
M	2,972	38.8	58.8	2.4*
W	2,354	42.9	53.3	3.6
Widowed	1,189	28.2	59.6	12.0
M	247	26.9	59.7	13.4*
W	943	28.6	59.6	11.7
Separated/Divorced	1,017	25.5	63.7	10.8
M	418	27.6	62.5	9.8*
W	599	24.0	64.6	11.4*
NUMBER OF FRIENDS+				
Total 15+	19,195	42.4	53.7	3.7
Few are close	12,162	40.5	55.7	3.5
Most are close	7,033	45.8	50.1	3.9
0-8 friends	4,522	34.6	59.9	5.3
Few are close	2,511	33.4	61.6	5.0
Most are close	2,011	36.1	57.8	5.7
9-19 friends	6,428	41.8	54.5	3.4
Few are close	4,316	40.7	55.8	3.0
Most are close	2,112	43.9	51.8	4.3
20+ friends	8,214	47.4	49.6	3.0
Few are close	5,315	43.8	52.9	3.3
Most are close	2,899	54.0	43.4	2.4*

* high sampling variability
\+ Table does not include 415,000 Canadians who did not know, or did not indicate, the proportion of their friends whom they considered as close friends.

TABLE 11: **DISTRIBUTION OF POPULATION OVER SELF-REPORTED LEVEL OF HAPPINESS AND SELF-ASSESSED HEALTH, BY LEVEL OF STRESS, AGE 15+, CANADA, 1985**

		Among those who reported their lives were:			
	Total	Very Stressful	Fairly Stressful	Not Very Stressful	Not at All Stressful
Total 15+ (000's)	19,611	1,723	7,620	7,579	260
SELF-REPORTED LEVEL OF HAPPINESS					
% Very Happy	41.9	33.3	36.8	42.6	61.8
% Pretty Happy	54.1	51.3	59.1	55.7	36.7
% Not too Happy	3.8	15.4	4.1	1.7	1.6*
SELF-ASSESSED HEALTH					
% Excellent	25.0	22.9	22.3	25.1	33.9
% Very Good	35.8	28.9	38.4	35.1	35.1
% Good	26.9	28.3	27.7	28.4	19.4
% Fair	9.3	11.9	9.1	8.8	9.5
% Poor	3.0	8.0	2.5	2.6	2.1*

* high sampling variability

TABLE 12: **PERCENTAGE OF POPULATION WITH AN ACTIVITY LIMITATION, BY AGE AND SEX, AGE 15+, CANADA, 1978-79 AND 1985**

	Canada Health Survey, 1978-1979:			Health Promotion Survey, 1985:		
	Total Population (000's)	Population with Activity Limitation (000's)	% of Total	Population (000's)	Population with Activity Limitation (000's)	% of Total
Total 15+	17,492	2,510	14.3	19,611	3,143	16.0
Men	8,584	1,153	13.4	9,623	1,301	13.5
Women	8,907	1,357	15.2	9,989	1,843	18.4
AGE						
15-24	4,548	220	4.8	4,333	368	8.5
M	2,294	107	4.7	2,203	144	6.5
W	2,254	113	5.0	2,130	224	10.5
25-34	3,806	285	7.5	4,476	391	8.7
M	1,895	117	6.2	2,225	174	7.8
W	1,911	168	8.8	2,250	217	9.6
35-44	2,666	279	10.5	3,529	489	13.9
M	1,335	131	9.8	1,769	175	9.9
W	1,331	148	11.1	1,760	314	17.8
45-54	2,442	416	17.0	2,520	410	16.3
M	1,214	191	15.7	1,263	212	16.8
W	1,228	226	18.4	1,257	198	15.7
55-64	2,011	535	26.6	2,306	648	28.1
M	960	269	28.0	1,108	273	24.7
W	1,051	266	25.3	1,199	375	31.3
65+	2,019	774	38.3	2,446	837	34.2
M	887	339	38.2	1,054	321	30.5
W	1,132	435	38.4	1,392	515	37.1

TABLE 13: **PERCENTAGE OF POPULATION WITH SELECTED HEALTH AND DISABILITY CONDITIONS, BY PROVINCE, AGE 15+, CANADA, 1978-1979, 1980-1982, 1983-1984, 1985**

	Life Expectancy in Years at Birth 1980/82		% of Population with Activity Limitation[1]	% of Population with a Disability[2]	% of Population in Fair or Poor Health[3]
	Men	Women			
Canada	71.88	78.98	11.6	12.8	12.3
Newfoundland	71.95	78.65	10.1	12.4	11.7
P.E.I.	72.83	80.49	13.3	12.0	11.7
Nova Scotia	70.96	78.37	14.0	14.9	15.9
New Brunswick	71.08	79.19	13.7	14.0	16.8
Quebec	71.08	78.71	10.2	11.5	13.5
Ontario	72.28	79.03	11.4	13.6	11.1
Manitoba	72.24	78.77	11.1	13.9	11.8
Saskatchewan	72.43	79.61	13.7	15.8	14.1
Alberta	71.96	79.06	10.6	11.0	11.7
B.C.	72.62	79.95	14.6	12.5	11.5
Yukon	..	..	..	..	7.8

1. Canada Health Survey of 1978/79
2. Canadian Health and Disability Survey of 1983/84
3. Health Promotion Survey of 1985

.. data not available

15

Potential Health

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Highlights

- 32% of Canadian adults see no need to improve their physical health; 71% perceive no need to improve their handling of stress.
- The groups most concerned about improving their health are: women, young adults (25-44) and the college-educated.
- For those perceiving the need to improve physical health:
  - 60% feel they should exercise more;
  - 15% feel they should stop smoking; and
  - less than 1% feel they should reduce drug use or drinking.
- For those perceiving the need to change how they handle stress:
  - 53% feel they should learn to relax, worry less;
  - 17% feel they should exercise more; and
  - less than 1% feel they should reduce drugs or drinking.
- 79% feel they need no information on health topics.
- Men are more likely to feel this way than women in every age group, but only by about 6%.
- The greatest perception of information need is at age 25-44, for both sexes.
- Those with elementary school education are least likely to want health information.
- Interprovincial variations range from 74% in Quebec saying "no need" to 89% in Newfoundland. As a region, the Atlantic provinces are uniformly high in perceiving no need for information.
- There is no difference in information needs for those who are rated "high", "moderate" or "low" in good health practices.
- 62% intend to take some action for health in the year following the survey.
- More exercise is the most common change people intend to make.
- The strongest intentions to take action are found among women aged 15-24, and among the university-educated.
- Only about 50% who say they should change (Q. 4) actually intend to change in a consistent fashion.
- Support for government action is greatest for road safety and drug use.
- The most "interventionist" across all issues are: women aged 25-64, Quebeckers and those currently practising several good health habits.
- 68% of all workers think that the worksite is an appropriate location for health promotion.
- There is a wide range (2:1) in the percentage in different industries which supports health promotion at work.
- 90% of all adults think that school is an appropriate place for health promotion.
- The higher one's own education, the greater the tendency to believe school is an appropriate place for health promotion.

* This chapter was prepared while the author was a visiting scientist at the Office of Analysis and Epidemiology, National Center for Health Statistics, Hyattsville, Maryland, USA.

Introduction

The questions which provided the results in this chapter form two groups – those preceding and those following the sections which probed personal health practices. The order was deliberately chosen to minimize the impact of earlier questions on later ones. And, since the interview was carried out on the telephone, it was of course impossible for the interviewee to know what questions to expect later on.

The early questions relevant to this chapter are those on the perceived need for personal change (Q. 3, 4, 6, 7) and for health information (Q. 12). Those which come later concern intentions to change (Q. 109), the importance of government action (Q. 79) and the appropriateness of school and work as locales for health promotion (Q. 103, 104).

Reports of intended behaviour change may well have been inflated by their late placement in the questionnaire and by a natural desire on the part of the interviewee to indicate some positive intentions. On the other hand, the placement of the question should have had minimal impact on the rank order of changes identified. Indeed, the fact that each respondent had just reviewed his or her own health practices in some detail suggests that the order of intended changes may be well-informed and thoughtful.

The exact wording of each question appears in the respective section describing results, as well as in Appendix B.

The results as reported here are not standardized, so that population estimates are made as accurate as possible. However, the reader should remember when comparing education groups or provinces, that age and sex differences in the composition of these populations may have some effect on the results. This impact is probably small, as explained further in Appendix A.

Prospects for personal health

Perceived need to change

Q. 3 "Do you think there is anything you personally should do to improve your physical health?"

Q. 6 "Do you think there is anything you personally should do to improve the way you cope with stress?"

Q. 4, 7 "What is the most important thing you personally should do?"

Two-thirds of Canadian adults acknowledge the need to change their health practices for the sake of their physical health, but this figure varies considerably from group to group. Of the groups analysed, the ones least likely to see a need for change are men and women aged 65 and over (32% each). The two youngest groups of women (aged 15-24 and 25-44) are most inclined to believe they should change their health practices (78% each), but young adult men are not far behind (76%). Table 1 contains the detailed results for age, sex, and education groups.

In contrast to these findings which apply to physical health, only 29% believe they should change their health practices in order to cope better with stress. Comparisons among age, sex and education groups reveal patterns very similar to those for physical health, as shown in Figure A and Table 1.

The strategies identified to improve physical health (Figure B) vary only a little from one group to the next. More exercise is the strategy of choice at every age and education level and for both sexes (Table 2). Compared to smoking cessation, which is the second choice, more exercise is cited by three to ten times as many individuals within specific groups.

There are only a few noteworthy differences between men and women in their tendency to elect certain strategies. Women are twice as likely to believe they should lose weight and men are somewhat more inclined to acknowledge they should stop smoking. Age makes very little difference to the selection of health-promotion strategies, except that smoking cessation is rarely elected by those age 65 and over.

In a similar fashion, there is one predominant strategy for coping with stress (Figure C). Relaxing more and worrying less is selected first by a considerable margin by every age-sex group and at every educational level. Of the other strategies for coping with stress, men are somewhat more likely to opt for more exercise while women choose more socializing, but the differences between the sexes are not large. As is true of changes for physical health, less than 1% believe they need to reduce drug or alcohol use for the sake of handling stress better (Table 3).

Perceived need for health information

Q. 12 "On which of the following topics do you feel you need more information . . . nutrition, high blood pressure, mental health, smoking, alcohol, marijuana, safety and accident prevention?" (Table A).

FIGURE A: **PERCENTAGE OF POPULATION WHICH BELIEVES IT SHOULD TAKE ACTION TO IMPROVE PHYSICAL AND MENTAL HEALTH, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985**

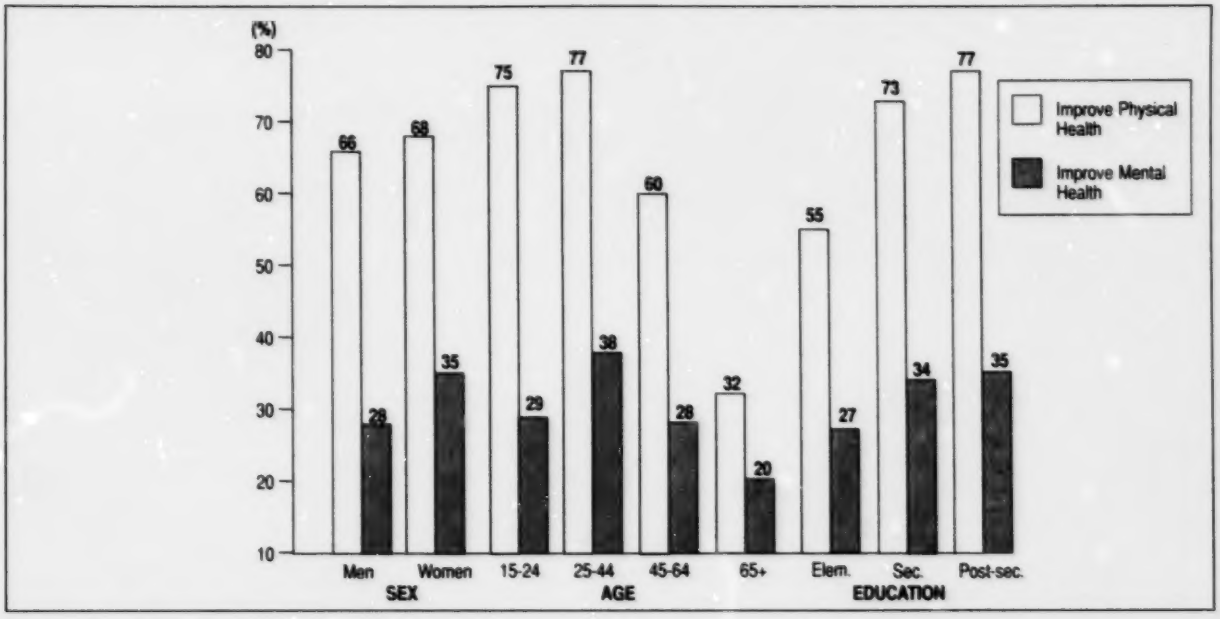


FIGURE B: **"WHAT IS THE MOST IMPORTANT THING YOU SHOULD DO TO IMPROVE YOUR PHYSICAL HEALTH?"*, AGE 15+, CANADA, 1985**

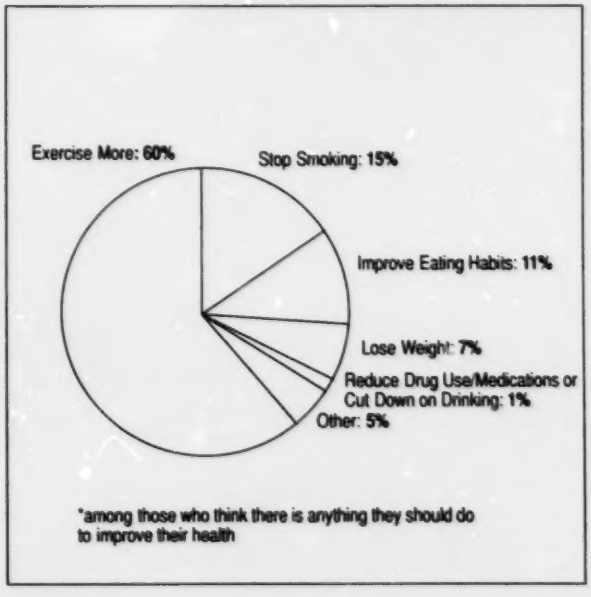

Exercise More: 60%
Stop Smoking: 15%
Improve Eating Habits: 11%
Lose Weight: 7%
Reduce Drug Use/Medications or Cut Down on Drinking: 1%
Other: 5%
*among those who think there is anything they should do to improve their health

FIGURE C: **"WHAT IS THE MOST IMPORTANT THING YOU SHOULD DO TO IMPROVE THE WAY YOU COPE WITH STRESS?"*, AGE 15+, CANADA, 1985**

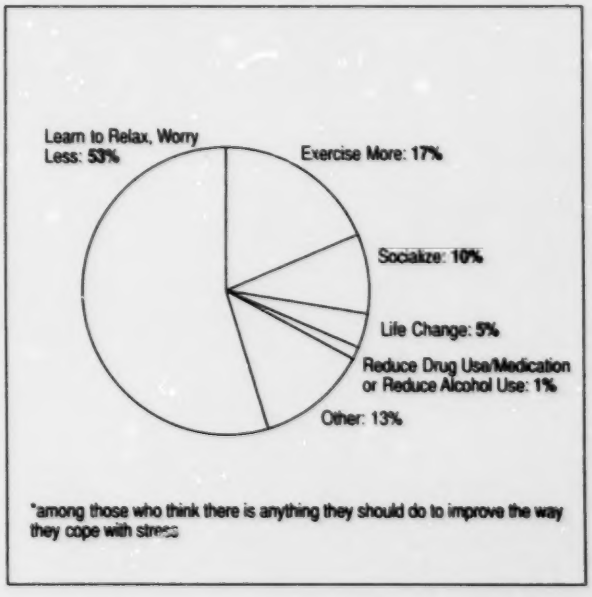

Learn to Relax, Worry Less: 53%
Exercise More: 17%
Socialize: 10%
Life Change: 5%
Reduce Drug Use/Medication or Reduce Alcohol Use: 1%
Other: 13%
*among those who think there is anything they should do to improve the way they cope with stress

TABLE A: **PERCENTAGE OF POPULATION DEMANDING MORE INFORMATION ON SELECTED HEALTH ISSUES, AGE 15+, CANADA, 1985**

	Among Total Population	Among Only Those Wanting Information
TYPE OF HEALTH ISSUE INFORMATION DEMANDED		
Nutrition	12%	54%
High blood pressure	10%	44%
Safety	9%	42%
Mental health	8%	37%
Smoking	5%	23%
Alcohol	4%	19%
Marijuana	1%	18%

Only 21% of adults feel there are topics on which they need more information, and there is little variation in this figure between age groups, sexes or education levels. There is more variation among the provinces, ranging from a low of 11% in Newfoundland to a high of 26% in Quebec who sense a need for health information (Figure D). Nutrition is most likely to be identified by those up to age 44 as the major information need, while high blood pressure is the chief interest of those 45 and older. Accident prevention and mental health are the only other topics drawing responses from more than 5% of adults (Table 4).

Intentions to change

Q. 109 ". . . is there anything you intend to do, to improve your health in the next year?"

While two-thirds (62%) of adults affirm their intentions to take some action on behalf of their health in the year following the survey, there are noteworthy differences between groups (Figure E). At every age, women are more likely to intend changes than are men, a difference which reaches 15% in favour of women at age 45-64 (51% vs. 36%). The decline with age is substantial, especially the 17% drop from 45-64 to 65 and over; this is true of both sexes (Table 5). The relationship of intentions to education is strong, with the biggest jump being from elementary school (55%) to secondary school (64%).

The actual changes intended are much like those which adults feel should be made for their physical health (Figure B and Table 1). More exercise, a change in eating habits, losing weight and smoking cessation are the changes intended by 10% or more of adults. While the intention to exercise more declines with age, this is more true of men than women: from age 35-44 onward, women are about 7% more likely to plan to exercise. Proportionally more women also intend to change their eating habits and to lose weight; this is true at all age levels (data not shown).

FIGURE D: **PERCENTAGE OF POPULATION WHICH FEELS IT NEEDS MORE INFORMATION ON AT LEAST ONE HEALTH TOPIC, BY AGE, SEX, EDUCATION AND PROVINCE, AGE 15+, CANADA, 1985**

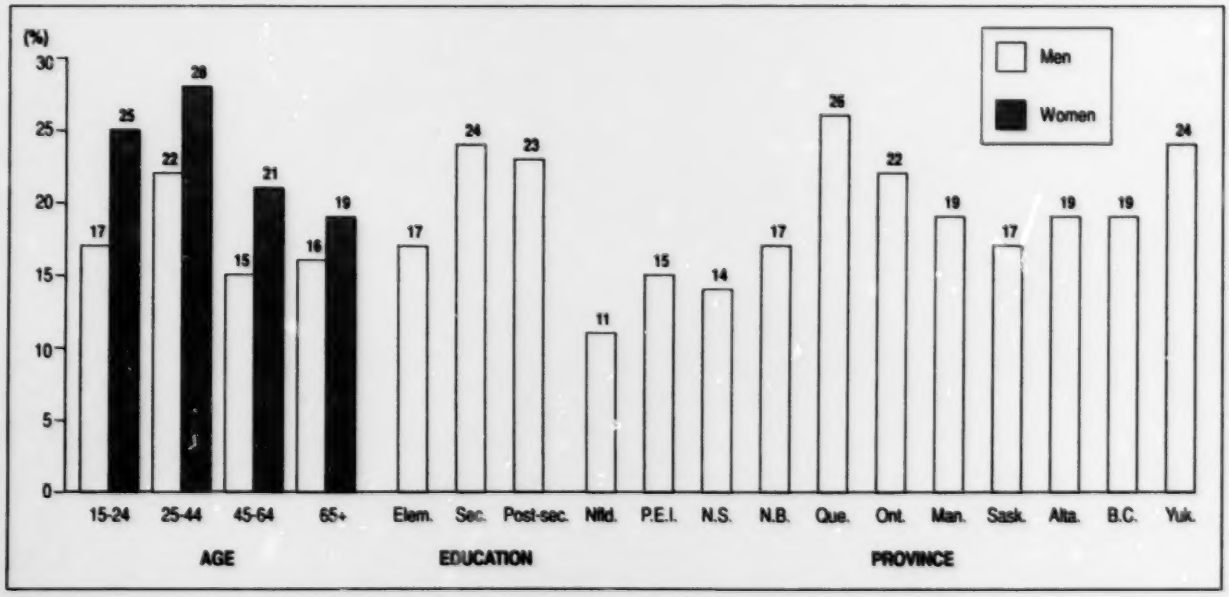


TABLE B: **PERCENTAGE OF POPULATION INTENDING TO DO SELECTED THINGS TO IMPROVE HEALTH IN THE COMING YEAR, AGE 15+, CANADA, 1985**

	% Among Total Population
TYPE OF CHANGE TO IMPROVE HEALTH	
None	38
More exercise	33
Change eating habits	13
Lose weight	10
Stop smoking	10
Reduce/manage stress	2
Medical treatment	2
BP check/control	1
Reduce drugs/alcohol	1
Other	4

For both men and women, the intention to change certain practices is related to current health habits. Those with few good health habits are most likely to intend to stop smoking, but are least likely to intend to exercise more. For men, it is those with a high number of good health practices who are most inclined to change their eating habits. This suggests an order of urgency, with smoking being relatively high and exercise and improved diet relatively low (data not shown).

TABLE C: **PERCENTAGE OF POPULATION WHICH INTENDS TO DO SOMETHING IN THE COMING YEAR TO IMPROVE HEALTH, BY PERCEIVED MEANS TO IMPROVE HEALTH, AGE 15+, CANADA, 1985**

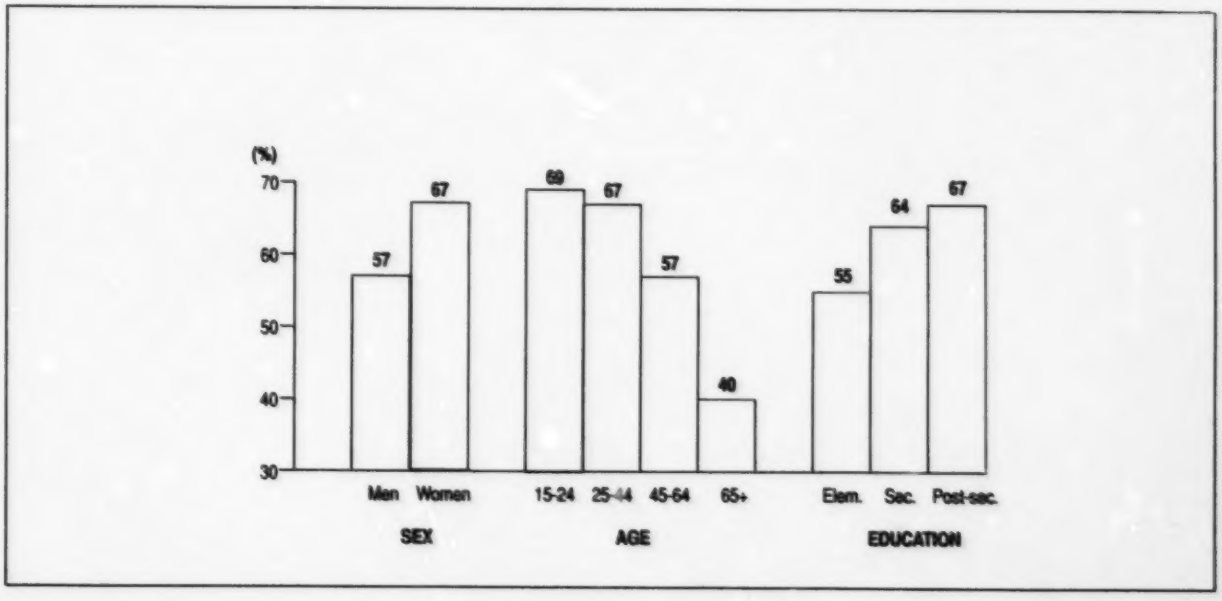
	% Intend to do Something to Improve Health
AMONG THOSE WHO SAY THEY SHOULD	
Exercise more	50
Lose weight	48
Stop smoking	51
Change eating habits	32

The intention to make changes can be compared to the belief that changes should be made. Table C shows that only half of those who feel they should exercise more, lose weight or stop smoking actually intend to do so.

Discussion

Taken as a whole, these findings suggest that adult Canadians are aware of the potential health benefits in changing personal health practices, but often feel unwilling or unable to make the required changes. A high level of acknowledgement that changes

FIGURE E: **PERCENTAGE OF POPULATION WHICH INTENDS TO TAKE ACTION IN THE YEAR FOLLOWING THE SURVEY TO IMPROVE HEALTH, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985**



should be made and a general disinterest in more health information may indicate that Canadians have been sensitized to the need for change and believe they have adequate information. Of those who feel they should make personal changes, about half intend to do so. If half of this number is successful, there should be discernible improvements in the prevalence of some behavioural risk factors by 1990. However, the probable inflation of the number reporting intentions tempers this conclusion somewhat.

Those who acknowledge that personal change is necessary but do not intend such change amount to roughly one-third of all adults. This sizeable group presumably consists of both "hard core" intransigents and those who face real or imagined barriers. This latter group, who are susceptible to positive change, will become increasingly important targets of health promotion efforts as time passes and more accessible and more tractable individuals have changed their behaviour in a healthful fashion. An analysis of barriers, including those in the environment, thus becomes an integral part of promoting behaviour change.

The results appear to suggest a much greater recognition of physical than mental health problems, (e.g., Figure A). This is not necessarily the case, or at least the difference may not be as great as indicated. Because of a concern that participants might be reluctant to acknowledge frankly emotional health problems or might be uncertain what was encompassed in the term "mental health," Q. 6 and 7 were phrased in terms of coping with stress. Pilot testing had revealed that this was of greatest concern in the psychological domain. However, it is not the only concern, and it is not synonymous with mental health. Comparisons with physical health should thus be made with considerable care.

The demographic analyses in this section reveal some important patterns. Women, young adults and the better-educated are consistently more likely to recognize the need for changes in lifestyle, to want more health information and to intend to modify their health habits. It can scarcely be a coincidence that these same groups generally enjoy better health status. Women's life expectancy is now 79 years at birth versus 72 for men,[1] the elderly suffer from a disproportionate share of acute and chronic health problems,[2] and the lower socio-economic classes are exposed to excessive risk[3] and die sooner.[4] In brief, neither health concern nor health status is evenly distributed in our society.

This apparent association between health concern and health status has two rather different explanations. On the one hand, the lack of concern and associated risk-taking behaviours may have a direct causal impact on the chances of avoiding illness and injury, and of speedy and complete recovery when these occur. On the other hand, the tendency of men, the elderly and members of lower socio-economic groups to be in worse health generally, and the fact that this seems to be such an established pattern, may induce a sense of fatalism and an apparent lack of concern about one's health. The concept of powerlessness and the related notions of self-efficacy and self-mastery are plausible psychosocial mechanisms underlying social disparities in health and disease.[5,6]

In all likelihood, both of these explanations are valid. Taken together, they point to a vicious cycle which, over a lifetime and from one generation to the next, would lead to solidly entrenched patterns of illness and premature death. Since biological and environmental factors also contribute to the relatively poor health of men, older people and lower socio-economic status individuals, it would obviously be a gross over-simplification to condemn the lifestyle practices and attitudes of these high-risk groups. The challenge of health promotion is to interrupt the vicious cycles underway in these groups, and to establish behaviour change that is sufficiently widespread that it has a beneficial impact on health and helps to break down the sense of powerlessness in these groups. Environmental supports for healthful behaviour may be crucial in this endeavor. Recent trends suggest that this has happened with middle-aged men with respect to smoking, and may be in process with regard to exercise among the elderly. It is more difficult to find widespread adoptions of positive health practices among lower socio-economic status groups. This would be an appropriate focus for the 1990s.

Perspective on public health

Importance of government action

Q. 79 "For each (of these topics), I'd like your opinion about how important you feel it is for the government to deal with each topic . . . drug use, smoking, alcohol problems, high blood pressure, child health, eating habits, mental health, accident prevention in the home, -at work, -on the road." (Responses were provided on a 10-point scale, where 10=extremely important.)

Although the ratings of importance for each issue vary from group to group, there is considerable agreement on the relative priority of topics. Road safety and drug use are first and second in importance for every age group of both sexes – with one exception. Both men and women age 25-44 rate child health as highest in importance (Table 6).

As Figure F shows, men and women agree strongly on the overall order of importance, even though consistently more women favour government action. Within age groups, male-female discrepancies are marked (15%) for selected issues: women age 15-24 are much more concerned than men about alcohol and mental health; for age 25-44, this shifts to home safety and eating habits. At age 45-64, women give proportionately more importance to alcohol, hypertension and eating habits. By age 65 and over, women are relatively concerned about smoking and alcohol (Table 6).

Overall, young (15-24) and elderly (65 and over) Canadians are less supportive of government action than are those aged 25-64. There are some important exceptions, however, e.g., the youngest women are most concerned about alcohol and the older men are most in favor of action on hypertension and home safety.

As is true of the demographic groups analysed, there is much agreement amongst the provinces on the relative priority of issues. However, the degree of consensus does vary; agreement is strongest on drugs and alcohol and is weakest on home safety and hypertension (Table 6).

Support for government action on health in general can be assessed by calculating the mean for the 10 issues. Degree of support varies considerably among the demographic groups and the provinces; only when comparing education levels are trivial differences found (Figure G and Table 6). Women at every age are much more supportive of action than men; this is also true whether they practice few, some or many good health habits. For women, those aged 25-44 are most supportive; for men, it is the next older age group. There are distinct east-west differences in support, with a large decline at the Quebec-Ontario border. Yukoners and Ontarians are 12% less likely than Newfoundlanders and Quebeckers to favour government action on these health issues.

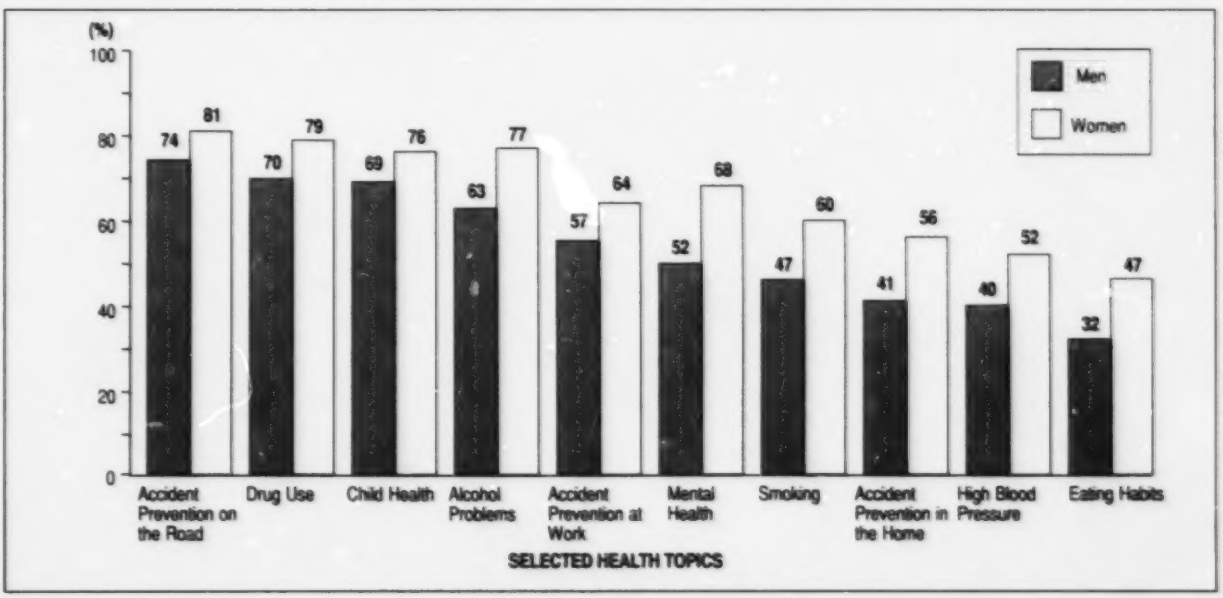
Health promotion locales

Q. 103 "Do you think your place of work is an appropriate place to promote good health habits?"

Q. 104 "Do you think schools are an appropriate place to promote good health habits?"

While the vast majority of survey respondents agree that both workplace and school are appropriate sites for health promotion, there is a strong overall consensus in favour of the schools. Although variation in this belief is very limited, it does appear to be inversely related to opinions about workplace health promotion (Table D). Quebeckers are most in favour of worksite programs and least supportive of health promotion at school, while Newfound-

FIGURE F: **PERCENTAGE OF POPULATION WHICH BELIEVES IT IS VERY IMPORTANT FOR GOVERNMENT TO DEAL WITH SELECTED HEALTH TOPICS, BY SEX, AGE 15+, CANADA, 1985**



landers are least likely to endorse the worksite and rank first (with Alberta) in supporting school programs.

With respect to health promotion at work, there is a wide range in belief about its appropriateness between workers in different industries (Figure H). While 68% of all working Canadians believe that the worksite is an appropriate locale for promoting health, this ranges from 50% of those in retail trade to 93% in business. (See also Chapter 10).

Discussion

Adult Canadians seem generally to be in favour of government action on selected health issues and to favour the promotion of good health practices at both school and work. The correct interpretation of these findings is less clear, however. Support for government action could reflect:

a) the societal importance of the issue as seen by the respondent;

b) the personal importance of the issue to the respondent;

c) belief in the likely effectiveness of government action versus other available strategies; or

d) a philosophical belief in the appropriateness of government intervention, which may vary from issue to issue.

TABLE D: **PERCENTAGE OF POPULATION* WHICH AGREES THAT WORK AND SCHOOL ARE APPROPRIATE SITES FOR HEALTH PROMOTION, AGE 15+, CANADA, 1985**

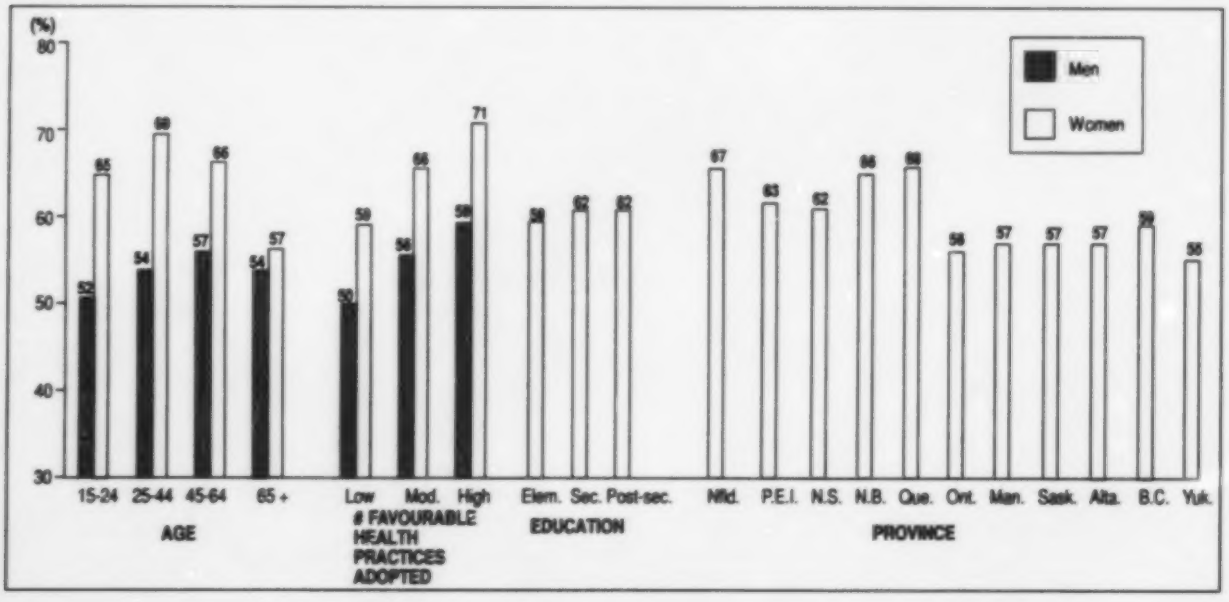
	% Agree Work Appropriate	% Agree School Appropriate
Canada	68	90
Newfoundland	59	93
Prince Edward Island	66	91
Nova Scotia	69	92
New Brunswick	59	90
Quebec	73	83
Ontario	66	92
Manitoba	70	91
Saskatchewan	71	93
Alberta	63	93
British Columbia	67	93
Yukon Territory	68	91

* wage earning population only

There is some evidence to support each of these views and it is difficult to conclude which predominates.

Individual perceptions of societal importance tend to reflect beliefs about relative risk rather than population-attributable risk.[7] For example, the case fatality rate of AIDS is extremely high, even though the proportion of the population at risk is extremely small, thus AIDS has captured the public's attention

FIGURE G: **PERCENTAGE OF POPULATION WHICH BELIEVES THAT IT IS VERY IMPORTANT FOR GOVERNMENT TO DEAL WITH AT LEAST ONE HEALTH TOPIC, BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985**

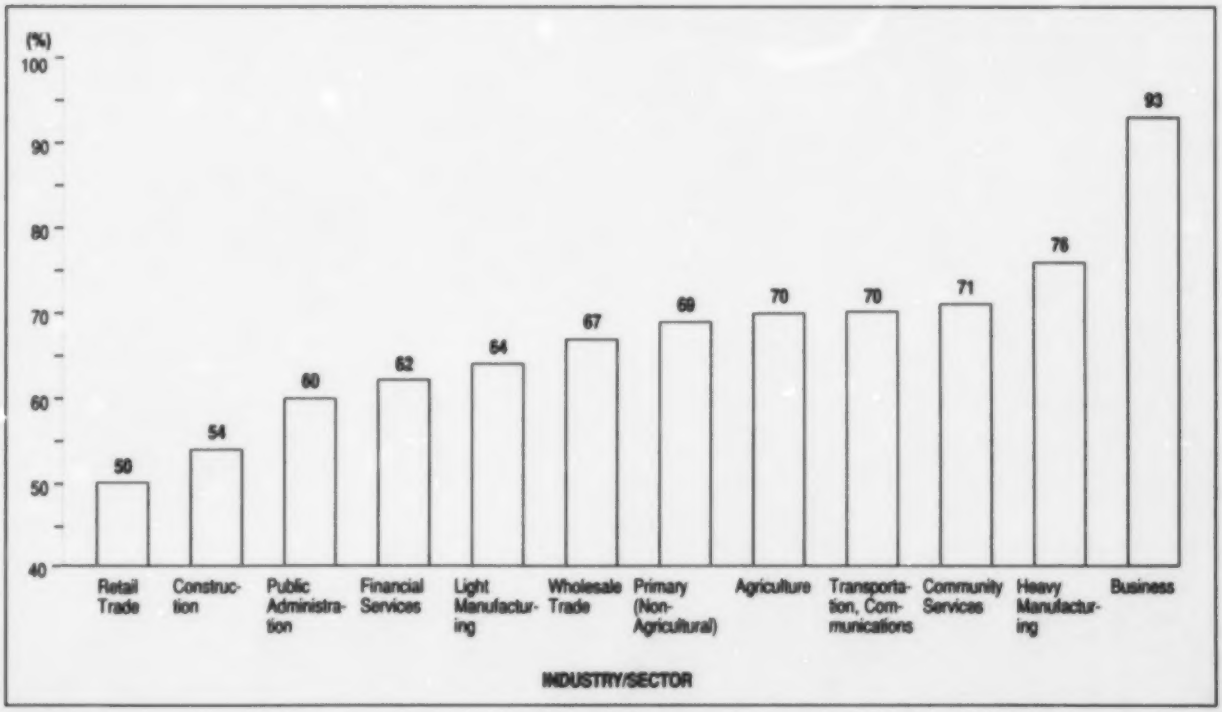


in a way that heart disease has not. This may explain the high ratings for road safety, alcohol and drugs, which affect relatively few people but in a rather dramatic fashion, and the low ratings for hypertension and eating practices, which affect large numbers but in a prolonged and insidious manner. Road safety, alcohol and drugs may also be seen as important areas for intervention because they affect young people disproportionately.

The importance of an issue to one's personal situation is bound to affect ratings of the importance of government action. This is seen in several instances where one's stage in the life cycle makes some issues more salient than at other periods. Thus child health is of greatest concern to young parents, as is hypertension to older men. The oldest group of women express little interest in action on smoking, a habit which is least prevalent amongst this group. The fact that less than 1% of adults feel they should reduce their own alcohol or drug use, while 70-75% rate these as very important areas for government action, has two possible explanations: either the hypothesis of personal concern does not stand up here or there is widespread denial about the extent of personal substance abuse.

A belief in the likely effectiveness of government action would also explain why road safety, alcohol and drugs rate highly, since legislation and regulation strongly affect all three, presumably in ways to restrain harmful behaviour. On the other hand, there are few obvious ways for government to take effective action on eating habits or home safety, other than to provide information and ensure product safety. To complicate matters a bit more, the meaning of "government action" may also vary from issue to issue and from person to person. For example, residents of the Atlantic provinces are generally supportive of a government role, but indicate little need for health information. Public education is thus presumably not the intervention which Atlantic Canadians have in mind when answering this question. This may be generally true across the country, since information needs are highest (nutrition, high blood pressure) for topics for which government action is rated lowest, and vice versa. Legislation, regulation and provision of treatment, in addition to education, are forms of government action encompassed by this question.

FIGURE H: **PERCENTAGE OF WAGE-EARNERS IN SELECTED INDUSTRIES/SECTORS WHICH BELIEVE THAT THE WORKPLACE IS AN APPROPRIATE PLACE TO PROMOTE GOOD HEALTH HABITS, AGE 15+, CANADA, 1985**



Philosophical beliefs about the appropriateness of government involvement in personal health behaviour will vary from person to person and result in a certain bias in rating all of the issues. However, conservatives and liberals are most likely to agree on intervention when individual behaviour may affect the safety of others, hence the high ratings for road safety and alcohol, but the lower ratings for smoking, home safety and eating habits. If this interpretation is correct, support for action on smoking will grow in importance as the effects of passive smoking become more widely known.

These four explanations are not mutually exclusive and, as can be seen from the examples, may combine to make ratings on many of these quite stable. The implication is that government action in areas such as home safety, dietary practices and hypertension will not receive much support unless perceptions of the risks change and government convinces the public it has an appropriate role which can be played effectively.

Conclusion: potential health

This global overview of health promotion issues has revealed that certain groups in society are more committed than others to maintaining or improving their own health. While there are individual exceptions, and not every issue conforms to the pattern, it is generally the case that this commitment is more true of women than men, of the young than the older and of the more educated than the less educated. Moreover, as earlier chapters have revealed, women and the more educated (but not always the young) are also more likely to practice good health habits. This chapter also indicates that the health concern of these groups is not merely personal, since women are more in favor of government action on a range of issues and the more educated are more supportive of health promotion in schools.

The challenge for health promotion, whether by government or non-government agencies, is clear. Further progress in health risk reduction is unlikely to be achieved to any substantial degree by "preaching to the converted". The strategy for health promotion must now shift to more careful selection of messages for specific target groups. In general this means:

- the health concern of the "converted" should be maintained at its current high state; and
- the health concern of the "unconverted" needs to be developed from its current low state.

One approach to achieving both aims may lie in the active recruitment of the "converted" to assist in reaching the "unconverted" through the use of positive role models among other techniques. Such a strategy should take account of the concept of powerlessness, particularly in the case of lower socio-economic status groups. Merely increasing the volume of health promotion rhetoric is not likely to be effective and may be counterproductive.

This suggestion emerges from an analysis of the data on several health issues taken together. It must be supplemented by strategies peculiar to individual issues, as discussed in earlier chapters. The total message is unmistakable, however: continued impressive gains in health promotion and disease prevention will require more complex, targeted and differentiated strategies for different groups in society.

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TABLE 1: PERCENTAGE OF POPULATION WHICH BELIEVES IT SHOULD TAKE ACTION TO IMPROVE PHYSICAL HEALTH, AND RESPONSE TO STRESS, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985

	Population (000's)	% who believe they should take action to improve . . . Physical Health	Response to Stress
Total 15+	19,611	67.7	31.4
Men	9,623	66.5	27.6
Women	9,989	68.8	35.1
AGE			
15-24	4,333	74.1	29.1
M	2,203	70.2	22.7
W	2,130	78.1	35.7
25-44	8,005	78.3	38.5
M	3,994	77.7	35.0
W	4,011	79.0	41.9
45-64	4,827	59.0	27.9
M	2,371	56.0	24.9
W	2,456	61.9	30.8
65+	2,446	38.7	19.5
M	1,054	40.1	15.8
W	1,392	37.7	22.3
EDUCATION			
Elementary	7,173	55.8	26.8
Secondary	7,871	73.7	33.8
Post-Secondary	4,368	77.2	35.2

TABLE 2: "WHAT IS THE MOST IMPORTANT THING YOU SHOULD DO TO IMPROVE YOUR PHYSICAL HEALTH?", BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985

	Eligible+ Population (000's)	Exercise More %	Stop Smoking %	Eat Better %	Lose Weight %	Reduce Drugs or Alcohol %	Other %
Total 15+	13,270	60.1	15.1	11.1	7.3	0.9	5.1
Men	6,396	59.6	17.2	10.9	5.3	1.8	5.1
Women	6,874	60.5	13.2	11.3	9.2	–	5.1
AGE							
15-24	3,209	64.8	12.9	13.0	5.4	–	2.7
25-44	6,268	59.3	17.7	10.2	7.0	–	4.3
45-64	2,846	57.4	14.5	9.9	9.9	–	7.6
65+	947	57.0	–	14.3	7.9	–	10.9
EDUCATION							
Elementary	3,999	58.3	16.6	10.5	6.3	–	6.7
Secondary	5,798	59.4	15.8	11.5	7.9	–	4.3
Post-Secondary	3,370	63.5	12.6	10.8	7.5	–	4.3

– not releasable
+ Includes only those who think they should improve their health

TABLE 3: "WHAT IS THE MOST IMPORTANT THING YOU SHOULD DO TO IMPROVE THE WAY YOU COPE WITH STRESS?", BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985

	Eligible+ Population (000's)	Work Less %	Exercise More %	Socialize %	Life Change %	Reduce Drugs or Alcohol %	Other %
Total 15+	6,163	52.8	16.7	10.3	4.6	0.8	13.0
Men	2,655	49.0	19.5	9.8	6.2	1.3*	12.3
Women	3,508	55.7	14.5	10.7	3.5	–	13.6
AGE							
15-24	1,260	53.7	12.9	15.1	3.0*	–	12.7
25-44	3,080	51.4	20.6	8.6	4.2	–	12.9
45-64	1,346	52.4	13.8	8.3	6.5	–	14.3
65+	477	60.8	–	14.4	–	–	11.4
EDUCATION							
Elementary	1,923	57.1	12.5	13.2	1.2*	–	12.8
Secondary	2,659	53.6	14.8	9.5	6.4	–	13.5
Post-Secondary	1,535	45.9	25.4	8.5	5.7	–	12.1

* high sampling variability
– not releasable
+ Includes only those who think they should improve the way they cope with stress

TABLE 4: PERCENTAGE OF POPULATION WHICH FEELS IT NEEDS MORE INFORMATION ON SELECTED HEALTH TOPICS, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985

	Population (000's)	Nutrition %	High Blood Pressure %	Safety %	Mental Health %	Smoking %	Alcohol %	Marijuana %	Nothing %
Total 15+	19,611	11.5	9.6	9.0	7.9	4.9	4.1	1.2	78.5
Men	9,623	9.9	8.5	7.2	6.2	3.8	3.7	3.1	81.5
Women	9,989	13.0	10.6	10.8	9.5	6.0	4.5	4.6	75.6
AGE									
15-24	4,333	12.0	8.4	9.6	9.5	6.3	6.2	5.1	79.1
25-44	8,005	14.4	11.1	11.2	9.0	6.2	5.0	4.6	74.8
45-64	4,827	7.5	8.1	6.8	6.3	3.3	2.3	2.9	82.1
65+	2,446	8.7	9.4	5.3	4.6	–	–	–	82.4
EDUCATION									
Elementary	7,173	9.9	8.1	7.9	6.4	4.9	3.4	3.1	82.6
Secondary	7,871	12.6	10.9	9.4	9.2	5.7	4.4	4.2	75.6
Post-Secondary	4,368	12.4	9.9	10.7	8.1	3.8	4.5	4.6	76.6

NOTE: Sample size does not permit provincial breakdowns for these topics.
– not releasable

TABLE 5: PERCENTAGE OF POPULATION INTENDING TO DO SELECTED THINGS TO IMPROVE HEALTH IN THE YEAR FOLLOWING THE SURVEY, BY AGE, SEX AND EDUCATION, AGE 15+, CANADA, 1985

	Population (000's)	Increase Exercise %	Improve Eating Habits %	Lose Weight %	Quit/ Reduce Amount Smoked %	Reduce Stress level/ Manage Stress %	Receive Medical Treatment %	Check or Control Blood Pressure %	Reduce Drugs, Medication or Alcohol %	Other %	Nothing %
Total 15+	19,611	32.9	13.4	9.8	10.4	2.0	2.0	1.4	1.1	4.3	38.3
Men	9,623	31.5	10.1	6.2	10.7	1.9	1.7	–	1.7	4.1	43.3
Women	9,989	34.3	16.5	13.3	10.2	2.1	2.3	1.5	–	4.5	33.5
AGE											
15-24	4,333	44.4	19.0	6.2	10.6	–	0.5*	–	–	2.9	30.7
25-44	8,005	37.8	14.0	11.5	12.8	2.5	0.9*	–	–	4.2	33.1
45-64	4,827	23.6	9.8	13.0	10.5	2.6	3.4	–	–	5.2	42.9
65+	2,446	15.0	8.6	–	–	–	5.3	–	–	5.2	59.8
EDUCATION											
Elementary	7,173	26.2	12.9	12.0	10.4	1.5	3.4	1.6	1.7	4.7	44.8
Secondary	7,871	35.6	14.2	14.8	11.3	1.6	1.6	1.0*	–	3.4	35.6
Post-Secondary	4,368	40.3	12.8	12.6	9.1	3.5	–	–	–	5.2	33.2

* high sampling variability
– not releasable

TABLE 6: **PERCENTAGE OF POPULATION WHICH FEELS IT IS VERY IMPORTANT FOR GOVERNMENT TO DEAL WITH SELECTED HEALTH TOPICS, BY AGE, SEX, EDUCATION AND PROVINCE, AGE 15+, CANADA, 1985**

	Population (000's)	Drug Use %	Smoking %	Alcohol %	High Blood Pressure %	Child Health %	Eating Habits %	Mental Health %	Accident Prevention at Home %	Accident Prevention at Work %	Accident Prevention on the Road %	Average for all Topics %
Total 15+	19,611	74.2	53.6	70.2	46.1	72.4	39.8	60.1	48.3	60.7	77.8	60.3
15-24	4,333	70.1	47.3	72.0	40.2	73.2	35.3	57.1	49.5	62.6	80.9	58.8
25-44	8,005	75.0	56.3	73.6	48.4	77.2	39.9	59.0	48.5	58.7	78.1	61.5
45-64	4,827	78.1	56.6	68.4	47.5	70.6	43.1	65.3	47.0	63.4	77.6	61.8
65+	2,446	70.9	49.8	59.2	46.0	59.3	41.2	58.5	48.3	59.0	72.1	56.4
SEX												
Men 15+	9,623	69.8	47.2	63.3	39.6	69.2	32.0	52.3	40.8	57.4	74.3	54.6
15-24	2,203	62.5	40.7	63.7	36.1	69.7	30.1	46.4	43.1	60.3	77.2	52.1
25-44	3,994	69.6	49.8	67.6	40.5	73.3	30.0	49.8	36.7	52.2	71.4	54.1
45-64	2,371	77.2	51.2	60.8	39.5	66.5	35.0	59.8	42.0	61.7	76.3	57.0
65+	1,054	69.0	42.1	52.0	43.4	58.9	36.5	57.5	48.9	61.4	74.3	54.4
Women 15+	9,989	78.5	59.7	76.8	52.3	75.5	47.4	67.5	55.6	64.0	81.3	65.9
15-24	2,130	78.1	54.1	80.7	44.5	76.7	40.7	68.2	56.1	64.9	84.8	64.8
25-44	4,011	80.4	62.7	79.6	56.3	81.0	49.7	68.2	60.3	65.2	84.8	68.8
45-64	2,456	79.1	61.9	75.8	55.2	74.5	50.9	70.6	51.8	65.1	78.8	66.4
65+	1,392	72.4	55.7	64.5	48.0	59.6	44.8	59.2	47.8	57.1	70.4	57.1
EDUCATION												
Elementary	7,713	71.5	48.3	64.8	45.0	70.1	38.9	61.4	51.2	64.0	76.5	59.2
Secondary	7,871	75.6	53.8	73.3	46.8	74.8	40.7	60.3	48.5	61.7	80.6	61.6
Post-Secondary	4,368	77.3	62.9	75.0	47.6	73.3	40.8	58.6	44.3	54.9	76.7	61.6
PROVINCE												
Newfoundland	423	77.4	63.7	76.3	58.5	77.0	37.3	66.9	62.0	66.9	81.2	66.7
P.E.I.	96	79.0	58.5	75.4	49.6	72.6	35.3	57.8	48.0	61.3	78.4	61.6
Nova Scotia	681	79.4	58.8	75.6	52.6	73.6	36.1	64.5	52.0	57.5	77.8	62.8
New Brunswick	544	80.2	57.5	76.5	52.9	76.1	42.9	64.3	52.4	68.6	83.3	65.5
Quebec	5,148	74.5	58.3	72.2	51.9	79.7	63.6	69.7	60.9	67.2	79.0	67.7
Ontario	7,096	72.4	49.7	65.7	42.1	66.1	29.2	54.4	42.0	59.8	76.9	55.8
Manitoba	818	75.6	48.0	69.4	43.2	71.5	30.4	57.7	40.8	60.5	76.1	57.3
Saskatchewan	759	78.4	51.4	69.4	43.4	69.5	31.2	56.6	44.4	53.8	76.0	57.4
Alberta	1,762	73.9	50.6	71.8	42.7	72.3	31.3	57.2	42.1	55.0	74.0	57.1
B.C.	2,267	73.8	55.3	74.3	43.8	75.0	33.4	56.7	44.0	53.0	80.1	58.9
Yukon	17	71.2	48.1	71.1	40.2	70.2	31.3	54.5	38.6	55.2	68.0	54.8

16

Conclusions from Canada's Health Promotion Survey

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Introduction

This final chapter has two principal objectives. The first is to provide a synthesis of selected results of Canada's Health Promotion Survey (HPS). The second is to illustrate the potential of the data base as a planning tool by identifying important questions which the HPS is uniquely suited to answer.

The major concern in this chapter, as in the report itself, is with self-care and mutual aid practices, especially of selected target groups, namely youth, women, middle-aged men, the disadvantaged and the elderly. The chapter also summarizes the evidence of interprovincial differences in health practices. Eleven unique patterns of health behaviours and attitudes exist in Canada; this summary indicates that every province and territory has something to teach — and to learn — from the others.

This conclusion also describes some of the influences on behaviour that are identified in the conceptual model (Chapter 1). This intelligence is of potentially great value to health promotion planning because of its relevance and the fact that such information has not often been available before. These influences include attitudes and intentions, knowledge and beliefs and social factors such as friendships and friends' behaviour. Evidence from earlier chapters showing that these factors are indeed related to behaviour is reviewed here and selected attitudes and beliefs of key target groups are summarized.

Finally, policy and program challenges are addressed. In keeping with the recently-published *Framework for Health Promotion*,[1] this encompasses reducing inequities and increasing prevention.

Groups at risk

Target groups

As indicated in Chapter 1, the Health Promotion Directorate of Health and Welfare Canada identified several target groups in 1982 on which to focus program planning. Earlier chapters provide data on most of these groups; the exceptions are children, the disabled and Native Canadians. In addition to youth, the elderly, women and the disadvantaged, it is possible and useful to summarize the health practices of middle-aged men,[2] a group which accounts for most of the deaths due to heart disease in Canada.[3]

The target groups are defined here as follows:

- women — age 15 years and over;
- youth — age 15-24;
- middle-aged men — age 45-64;
- elderly — age 65 years and over; and
- disadvantaged — either less than secondary school education or lowest quintile of family income.

Women represent 51% of the adult Canadian population. The other groups are all significant minorities, each accounting for 13-22% of Canadian adults. Many individuals, of course, belong to more than one of these groups. The first row of Table 1 shows the sizes of these groups as of 1985.

Definitions of health practices

Fifteen self-care and mutual aid practices are defined in Table A. In many cases (e.g., smoking), the definition of desirable behaviour was easily established. For others (e.g., drinking), the existence of dose-response curves means that this was a somewhat arbitrary exercise. In such cases, a conservative definition of risk was adopted, with the result that the prevalence of desirable behaviour is lower than it might otherwise be. For example, seatbelt use any less frequent than "always" is treated as undesirable, even though this means that "almost always" and "never" are regarded as equivalent. For detailed findings, the reader is encouraged to refer to the respective chapter.

The three female prevention practices have definitions which vary depending on age. In these cases, the criteria of the Task Force on Periodic Health Examinations[4] were adopted. To show the prevalence level for the total female population, the criterion for the majority of the population was used.

Table 1 displays the prevalence levels on 12 behaviours for five target groups and the total population, as well as three additional practices for the female population. The percent distributions show a very wide range in the populations following good health practices, from 94% who do not use illicit drugs to 21% who have had first aid training. The variations in practice between groups is considerably less dramatic; nevertheless, practices are far from uniform in the Canadian population. Of the 15 practices in Table 1, only the use of child restraints is practiced with consistency by all groups.

Women appear to lead healthier lives overall than the other groups. There is a tendency for women to lack safety skills; but on other aspects of safety, as well as substance abuse, women are more likely than men to follow good health practices. Among women, those who are young, less-educated or elderly are all less likely to follow the three cancer-detection practices.

Youth of both sexes appear to be jeopardizing their natural good health in five areas and young women run three additional risks. Three of these practices — drinking, using illicit drugs and shunning seatbelts — could potentially interact, with disastrous consequences.

Middle-aged men share with youth a predilection for alcohol and a disdain for seatbelts. They also admit to driving after drinking more than any other group. The lack of exercise, combined with one of the highest levels of smoking, points to the possibility of eventual cardiovascular disease. The disadvantaged group is somewhat less likely than the population at large to practice self-care and mutual aid. For first aid training, ownership of safety devices and health information at work, it is the low-income group which is at risk. For seatbelts and exercise, it is those with less than secondary education.

With few exceptions, the elderly lead healthier lives than the population as a whole. The clear exceptions are safety skills which Canada's elderly are less likely to possess. Safety devices are also somewhat less common among this group (data not shown).

Provincial profiles

Each of the chapters of this report presents findings on interprovincial differences in the prevalence of important health behaviours. These are summarized in Table 2.

In order to permit ready comparison and to provide an overall impression of the pattern of health behaviour within a province or territory, the table shows only levels relative to Canada as a whole. No entry indicates that the provincial level on that variable is close to or at the national level. A minus sign (−) or plus sign (+) means that the province is below or above the mean, respectively. A double minus (−−) or plus (++) sign signifies that the province is lowest or highest on the variable in question. Needless to say, for some behaviours, a (+) is favourable to health while for others, a (−) is preferred.

The impression gained from Table 2 is that there are 11 unique patterns of health behaviour in Canada and none is clearly "better" or "worse" overall than the others.

Not only do prevalence levels vary, but clusters of related behaviours are different from one province to another. For example, smoking is most prevalent in Newfoundland and Yukon Territory, while support for smoke-free work areas is very high in Newfoundland but very low in Yukon Territory. Quebeckers are least likely to have an opportunity to intervene in a drunk-driving situation, but among the most likely to do so when needed. The reverse holds true in Saskatchewan: residents of that province are least likely to intervene, but among those most liable to be in a situation requiring intervention. Ontario is most often close to the national average, due to its size, but there are important exceptions for some behaviours. On the other hand, relatively small Manitoba, Saskatchewan and Newfoundland are also often close to the Canadian average. The areas which are most often different from the national average are British Columbia and Yukon Territory, yet these two neighbours are usually at opposite extremes. Other neighbours, such as New Brunswick, Nova Scotia and Prince Edward Island, are quite similar on many practices. Alberta resembles its prairie neighbours on many practices, but is notably different on others such as the female prevention behaviors and knowledge of CPR.

Trends over time

Because the Health Promotion Survey was designed with full awareness of previous health surveys in Canada (Chapter 1), it is possible to compare the prevalence of several health behaviours in 1985 to an earlier period. Typically, this baseline is 1978/79, at which time the Canada Health Survey (CHS) was conducted.[5] The similarity in question wording and sample designs of the HPS and CHS make such comparisons reasonable. Although both are undoubtedly affected by some error, there is not likely to be any systematic bias which would account for improvements over this six-year period.

Figure A shows changes in the prevalence of nine health practices, the only ones for which truly comparable data exist. In every case, there has been a change for the better. In particular, there have been impressive increases in the regularity of the female preventive practices and the use of seatbelts. Less dramatic but nonetheless important are the reductions in the prevalence of drinking, smoking and cannabis use.

Discussion

This overview of the self-care and mutual aid practices in the Canadian population should help to focus health promotion efforts where they are needed most. However, the reader should remember that some key groups are missing from this analysis. For example, the smoking behaviour of young women is not dealt with in the table, although it is a proper area of concern (Chapter 3). Native people, the disabled and children are also not considered here. On the other hand, the data for middle-aged men suggest that they should be treated as a target group for health promotion efforts.

The patterns revealed in Table 1 serve to confirm the conclusion of Chapter 13, linking health behaviour to health status. Although definitive proof requires data outside the scope of this chapter, it is clear that the health behaviours examined throughout this report are consistent with what we know of the mortality experience of these groups. Women consistently lead healthier lives than men in many respects and live, on average, seven years

longer.[6] The disadvantaged suffer more disability and die sooner than their more educated and affluent compatriots;[7] they are also somewhat less likely to practice self-care and mutual aid. Youth are generally healthy but experience disproportionate numbers of automobile accidents;[3] it seems hardly coincidental that they are also more likely to drink, use illicit drugs and shun seatbelts. Men, beginning in middle age, account for most coronary heart disease and this represents the major cause of death for men of all ages.[3] Smoking and lack of exercise are almost certainly two of the reasons for this, even though a firm test of this conclusion is not possible with the survey data. Finally, it is noteworthy that the elderly generally have healthy lifestyles. This is probably due to selective survival – the tendency for those with healthy lifestyles to live longer. Although the present cross-sectional data cannot provide conclusive evidence on this relationship, an earlier population study with a prospective design[8] has shown this to be the case.

Open questions

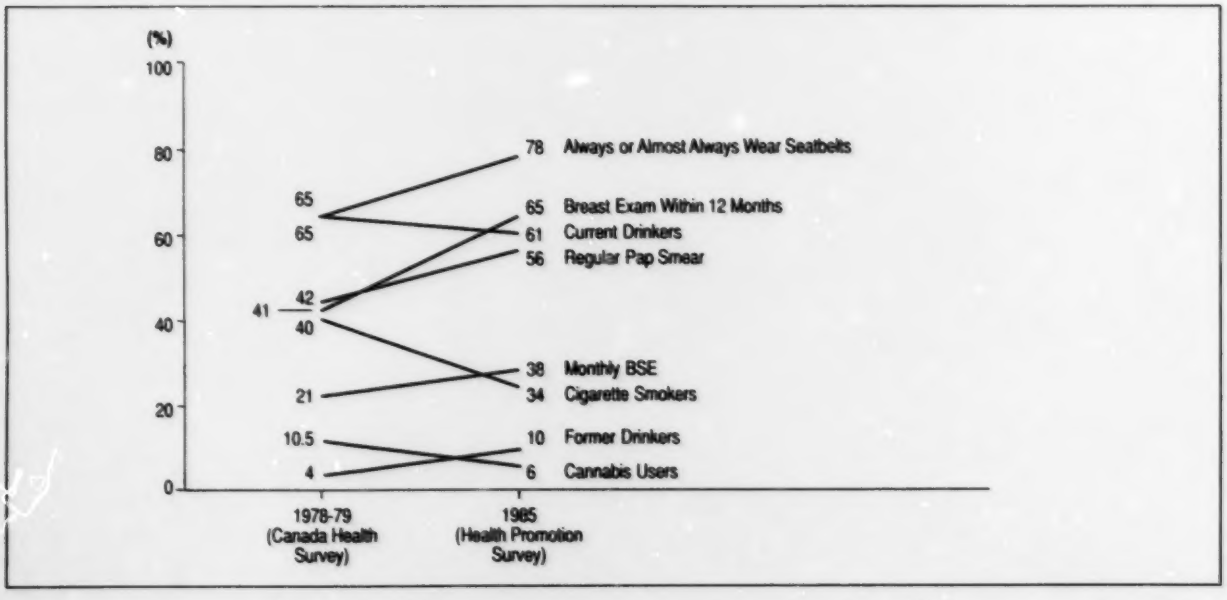
This type of analysis suggests new avenues of enquiry which can be explored with the HPS data base. Other groups of interest can be identified, including the disabled (Q. 16, 17), members of different language groups (Q. 83) and workers in different occupations or industries (Q. 92-94).

Standardizing for age, sex and education level may be important in such analyses. In reviewing Table 1, for example, one needs to remember that most elderly Canadians are women, most youth are relatively well-educated, and that many of the disadvantaged are elderly. Such standardizing is less important if the interest is in absolute prevalence levels, but more important if the interest is in seeking explanations (see Appendix A).

Many of these analyses that focus on target groups can be conducted at the provincial/territorial level, although the size of some groups may be too small (e.g., middle-aged men) for detailed examination, especially when the behaviours are not that prevalent. However, the sample design does ensure that all provinces have roughly equal potential for further analysis – a unique feature of this survey.

The provincial profiles in Table 2 raise many important questions, starting with the issue of standardization. The discussion of this topic in Appendix A suggests that standardizing for age, sex and socio-economic status (education or income) will likely have little impact on prevalence levels or rank order. Since the example in the appendix deals with smoking and exercise which both co-vary with age and social status and involves comparisons between the oldest and the youngest provinces, the lack of standardization in these tables does not appear to be much of an issue.

FIGURE A: **PERCENTAGE OF POPULATION WHICH DEMONSTRATES SELECTED HEALTH CHARACTERISTICS REFLECTING IMPROVEMENTS IN PREVENTIVE PRACTICES, AGE 15+, CANADA, 1978/79 AND 1985**



The most significant question raised by these inter-provincial comparisons is not answerable by the HPS data alone, but is clearly worth pursuing. This concerns the possibility that systematic program or policy differences underlie the behavioural patterns revealed here. It is apparent that differences in seat-belt and child restraint legislation make a major difference in the use of these safety devices (Chapter 8). It is entirely plausible that other deliberate policies or programs can explain the patterns of prevalence levels in Table 2. Identifying these will help to determine models worth emulating in order to promote healthful behaviour.

The most important question raised by these positive developments is whether the trends shown for 1978/79 to 1985 will continue. This question will only be answered once the HPS is repeated; currently, this update is planned for 1990. The trend lines in Figure A suggest that five years is a sufficiently long period for detectable change to take place.

Influences on behaviour

Attitudes, beliefs and intentions related to behaviours

Chapter 1 explains the origin of the Health Promotion Survey, and the value to health promotion planning of knowing more about the health-related attitudes, beliefs and intentions of adult Canadians.

The conceptual model (Chapter 1) suggests that knowledge and beliefs are necessary but insufficient conditions for healthful behaviour. Like attitudes and intentions, they are subject to a variety of influences which may not always exert themselves in a consistent fashion. Certainly, social science has struggled for a long time with the inconsistency between individual attitudes and behaviour.

While the conceptual framework for the HPS does not claim to be able to predict behaviour, it does underscore the importance of knowing more about some of these important psycho-social influences. Several examples from earlier chapters attest to the relevance of including knowledge, beliefs, attitudes and intentions in a survey of health practices:

- Smokers are less knowledgeable than non-smokers about a variety of smoking-related matters. They are less likely to realize or acknowledge the effects of parental role-modeling, the danger of smoking to the fetus and the benefits of quitting (Chapter 3).
- Smokers also have consistently different attitudes toward smoking than non-smokers. They are more likely to feel that people are too concerned about second-hand smoke and that non-smokers will tolerate their smoking; and less likely to feel that non-smokers should have smoke-free work areas or that smokers should ask permission before lighting up (Chapter 2).
- Cannabis users are much less likely than non-users to believe that consumption can lead to general or specific health problems (Chapter 5).
- Women who have been shown how to examine their own breasts are 10% more likely to carry out monthly BSE than those who have not been shown (Chapter 7).
- Beliefs about how much one can drink without affecting ability to drive are strongly related to actual behaviour. Of those who say they cannot drive safely after drinking any alcohol, only 2% drive after drinking. This compares with 55% of those believing they can drive safely after five drinks (Chapter 8).
- Support for a government role in road safety is associated with the personal use of seatbelts: belts are always worn by 80% of those who believe that road safety is a very important concern for government, but by only 52% who regard it as not very important (Chapter 8).
- Canadians who feel that they make a deliberate effort to improve their health are more likely to own home safety devices than those who do not share this feeling (Chapter 9).
- Regular exercisers have different opinions from sedentary Canadians about the health benefits of more exercise. Inactive 25-44 year-olds anticipate more benefit from increased exercise than those who are already active. (Chapter 12).

Knowledge, beliefs, attitudes, and intentions of target groups

Since it is apparent from these few examples that there are important relationships among health practices, attitudes, beliefs and knowledge, it becomes important to know the distribution of these psycho-social influences in the population. The HPS is a data source of unprecedented richness for this purpose.

Table 3 summarizes the prevalence of several of these factors for the same target groups found in Table 1. Attitudes and intentions are grouped together, as are beliefs and knowledge. In a fashion analogous to the treatment of healthful behaviour, each of these items has been dichotomized for the sake of this summary and the prevalence of positive attitudes or intentions, correct knowledge or healthful beliefs is presented.

While there is less inter-group variation in attitudes and intentions than in behaviour, there are nevertheless some important patterns to be observed in

Table 3. Women have attitudes and intentions which are consistently more favourable to health than any of the other groups. The attitudes of youth are variable, but they exhibit the strongest intentions to make changes in the coming year. The attitudes of middle-aged men are generally more negative than the population in general, with the significant exception of a very positive attitude toward health promotion at work. Data are more sparse for the disadvantaged, but it is clear that those with less than high school education are relatively negative about health promotion at work and a government role in health issues, and are less likely than the average Canadian to intend to make changes for better health in the coming year. The elderly exhibit yet another pattern of attitudes, expressing the greatest support for concern about second-hand smoke, but little support for a government role and little intention to make healthful changes.

The variations in knowledge and belief in the second half of Table 3 are considerably greater than those for attitudes and intentions. While the restricted range of topics makes generalization risky, it appears that women and youth are relatively more knowledgeable and have more healthful beliefs, while middle-aged men, the elderly, and people with less than high school education are more negative in beliefs and knowledge. There are some important qualifications, however. Youth have the greatest confidence in their ability to drive safely after drinking and middle-aged men correctly realize that there is greater benefit to giving up cigarettes even after ten years of heavy smoking. Another potentially important pattern is hinted at in the data and deserves to be followed up: the knowledge and most beliefs of the disadvantaged group are only slightly less health-oriented than those of the general population. It is mainly in their lack of conviction that they should take action for health that this group is distinguished from the others. Perhaps this reflects an attitude more than a belief and results from a sense of powerlessness, a theme which is explored further in Chapter 15.

Social influences

Social influences on behaviour have not often been directly studied in national surveys although their importance is obvious. In the area of smoking, for example, 70% of Canadian adults realize the effect of parental modeling on children's likelihood of smoking (Chapter 3). Social influences are exercised primarily through marriage and friendships. Examples of the impact of each may be found in earlier chapters of this report:

- Smokers have friends and spouses who smoke while non-smokers have friends and spouses who do not (Chapter 3).
- Canadians with friends who drink too much are themselves much more likely to be heavy drinkers (Chapter 4).
- People with friends who drink too much are twice as likely to drive after drinking as people whose friends do not over-indulge (Chapter 8).
- Three home safety devices — a first aid kit, a fire extinguisher and a smoke detector — are most likely to be owned by married people and least likely to be found in the homes of widowed Canadians (Chapter 9).
- People with physically active spouses are 20% more likely to exercise regularly than people with sedentary spouses (Chapter 12).
- People whose friends are active are 41% more likely to be active than people with sedentary friends (Chapter 12).

Open questions

The description and analysis of knowledge, attitudes, beliefs, intentions and social influences in this report has, of necessity, just scratched the surface. While the age-sex distribution of these factors has been described in many of the preceding chapters, important questions remain concerning the knowledge, attitudes, beliefs, intentions and social influences of disadvantaged and disabled Canadians, in particular. Such analysis could provide insights into the reasons behind social inequities in health practices and health status. Perceptions of barriers (Q. 5, 8) to improve health should be considered in such an examination.

Much health promotion programming still rests on the assumption that good health practices will result from the dissemination of health information. The HPS data base permits an examination of this premise and related questions, such as perceived need for information as related to knowledge and beliefs.

The important role of social influences has been demonstrated here, with a focus on friends' behaviour. This analysis could be expanded by controlling for the effects of age and marital status. Presumably, friends have more influence on the behaviour of young, single peers, but other groups such as middle-aged men contemplating more exercise and less smoking may also be susceptible to positive social influences from their peers, including co-workers. The factors which influence the health practices of retirees, the unemployed and homemakers should also be examined, for these are groups cut off from certain types of social contact.

The conceptual model identifies intentions as the factor which most clearly predisposes to health behaviour. A discriminant analysis with intention as the grouping variable would not only provide a

useful test of the model but would also direct the attention of health promotion planners to the most important explanatory variables in this complex data set.

Policy and program challenges

Each of the chapters reporting survey results also deals with some of the practical applications of those results. While a comprehensive summary of these is beyond the scope of this final chapter, some highlights will illustrate the utility of the HPS data base as well as the challenges to be met by health promotion:

- Seventy-five percent of women have been shown how to do BSE . . . but only 47% actually perform it monthly (Chapter 7).
- More people want information on nutrition than on any other topic . . . but many more want no information at all (Chapter 15).
- Only one in five believes that smoking promotes slimness . . . but this belief is stronger among smokers and underweight people (Chapter 3).
- Over half the population wants to lose some weight . . . but this includes many normal or underweight women (Chapter 11).
- Legislation clearly promotes the regular use of seatbelts and car restraints for children . . . but not all jurisdictions have legislation (Chapter 8).
- Two out of three adults believe that improved eating habits would benefit their health . . . but only 13% intend to improve their eating habits (Chapter 15).
- Two-thirds of blue collar workers consider accident prevention at work to be very important . . . but managers give it a lower priority (Chapter 10).
- Most Canadian adults believe they should get more exercise . . . but one in five inactive people feel they exercise enough (Chapter 12).
- Most Canadian adults plan to make some changes to improve their health in the coming year . . . but only half of those who say they should change intend to do so (Chapter 15).

The recently-published federal *Framework for Health Promotion*[1] identifies three major challenges for health promotion — reducing inequities, increasing prevention and enhancing coping. Most of the findings in this report relate to the need for increasing prevention. However, there is also evidence in every chapter of continuing inequity of access to good health, which appears to be stubbornly associated with education and income levels.

Perhaps the most important findings related to socio-economic inequities concern attitudes and intentions rather than beliefs or practices. Disadvantaged Canadians are less likely than the population as a whole to feel they should make changes to improve their health, to want more health information or to intend to make positive changes in the coming year (Chapter 15). In these respects, the disadvantaged share the views of the elderly. The common factor affecting both groups may be a sense of hopelessness, of being overwhelmed by the inevitability of disability and illness. The newly-emerging field of psychoneuroimmunology[9] considers it plausible that such a state of mind can affect the immune system, making the body more susceptible to a wide range of diseases. The concepts of powerlessness, sense of coherence, and self-efficacy[11,12] appear to be highly relevant to understanding and reducing socio-economic disparities in health.

The implication for health promotion is that "blaming the victim" for lifestyle practices which pose a hazard to health is simplistic and unlikely to lead to positive change, however desirable that change may be. Environmental supports, including positive social influences, clearly have to be bolstered. The research implication is that further analysis of the HPS and other sources is required in order to improve our understanding of psycho-social influences on health behaviour.

Improving prevention

The second challenge in the federal framework is "to find new and more effective ways of preventing the occurrence of injuries, illnesses, chronic conditions and their resulting disabilities".[1] The data presented throughout this report confirm that this is a major challenge and that meeting it will require clear objectives and strategies.

Health promotion objectives have recently been articulated in a variety of jurisdictions, including the Province of Quebec,[13] the United States,[14] and the European Region of the World Health Organization (WHO).[15] Where such objectives have been in place for a number of years, such as in the United States, they appear to have stimulated a great deal of activity which has made their attainment a more realistic prospect.[16] Such objectives should serve a similar energizing and guiding purpose in Canada.

The findings of the HPS regarding target groups (Table 1) and interprovincial differences (Table 2) indicate that a uniform set of health promotion objectives would be less meaningful in Canada than would objectives tailored to regional and sub-group differences. Nevertheless, it is possible to specify overall objectives for increasing the prevention effort in Canada. These can be used as a baseline for developing objectives specific to target populations.

The following suggested objectives deal only with health practices and are based on the survey findings. A truly comprehensive set would extend to knowledge and attitudes, delivery of health services and environmental factors. One or two illustrations are offered from each chapter.

Substance abuse

- By the year 2000, fewer than 20% of Canadian adults should smoke cigarettes (1985 level: 34%).
- By the year 2000, more than 85% of Canadian adults should work in areas where smoking is restricted (1985 level: 41%).
- By the year 2000, fewer than 4% of Canadian adults should average more than two drinks per day (1985 level: 8%).
- By the year 2000, fewer than 2% of Canadian adults should have used cannabis or cocaine within the previous 12 months (1985 level: 6%).
- By the year 2000, fewer than 3% of Canadian adults should have used sleeping pills within the previous 12 months (1985 level: 8%).

Disease detection

- By the year 2000, more than 95% of Canadian adults should have had a blood pressure check within the time period prescribed for their age (1985 level: 88%).
- By the year 2000, more than 80% of Canadian women should have had a Pap smear within the previous year (1985 level: 56%).
- By the year 2000, more than 80% of Canadian women should have had a breast examination by a health professional within the previous year (1985 level: 65%).
- By the year 2000, more than 67% of Canadian women should examine their own breasts on a monthly basis (1985 level: 38%).

Safety and accident prevention

- By the year 2000, more than 90% of Canadian adults should be wearing seatbelts on a regular basis (1985 level: 78%).
- By the year 2000, more than 95% of Canadian children should regularly be placed in car restraints (1985 level: 84%).
- By the year 2000, fewer than 5% of Canadian adults should drive after drinking any amount of alcohol (1985 level: 16%).
- By the year 2000, more than 95% of Canadian adults should intervene when required to prevent impaired driving (1985 level: 76%).
- By the year 2000, more than 95% of Canadian homes should have a smoke detector (1985 level: 77%).
- By the year 2000, over 80% of Canadian workers should be aware of accident prevention programs at work (1985 level: 58%).

Nutrition and exercise

- By the year 2000, more than 90% of Canadian adults should have breakfast on a daily basis (1985 level: 72%).
- By the year 2000, more than 75% of Canadian adults should exercise for at least 15 minutes three times weekly (1985 level: 54%).

Improving the information base

Setting objectives for increasing prevention efforts implies that monitoring of progress should be carried out. The update of the HPS planned for 1990 will be important for charting progress on a wide range of variables for which no trend data currently exist (i.e., some behaviours and most of the knowledge, beliefs, attitudes, and intentions assessed in 1985). Even for those practices which have been measured at two time points (Figure A), there are questions about the stability of the trends observed. Three time points is really a minimum for establishing a trend with confidence. The need to monitor progress toward objectives, combined with knowledge of the rates of change possible for some practices, suggests that repetition of the HPS approximately every five years is itself an objective worth attaining. Thus, one could conclude:

- By the year 2000, 100% of those responsible for health promotion planning in Canada should have a reliable information base concerning health practices, knowledge, beliefs, attitudes and intentions, their distribution in the Canadian population, and their change since 1985.

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TABLE 1. **SIZE AND PERCENTAGE OF POPULATION WHICH USES SELECTED SELF-CARE AND MUTUAL AID PRACTICES, BY SELECTED CHARACTERISTICS, AGE 15+, CANADA, 1985**

		Population	Women (15+)	Youth (15-24)	Middle-Aged Men (45-64)	Elderly (65+)	Lowest Income	Less Than High School Education
Total 15+	%	100	51	22	13	13	14	37
	(000's)	19,611	9,989	4,333	2,371	2,446	2,826	7,173
Non-smoker: do not currently smoke cigarettes	%	66	68	65	64	81	64	63
	(000's)	12,943	6,793	2,816	1,517	1,981	1,809	4,519
Drinking not more than 2 drinks daily	%	91	96	90	87	95	94	91
	(000's)	17,856	9,628	3,900	2,063	2,324	2,656	6,527
Illicit drugs: neither marijuana nor cocaine in last year	%	94	95	86	99*	99*	99*	95
	(000's)	18,434	9,499	3,713	2,359	2,434	2,812	6,814
Drinking before driving: no occasions in last month	%	84	92	84	81	96	90	87
	(000's)	16,454	9,230	3,653	1,911	2,348	2,557	6,255
Seatbelts: always fastened	%	66	72	57	61	78	64	62
	(000's)	12,845	7,182	2,470	1,456	1,896	1,820	4,541
Child restraints: always insist on use	%	84	87	xx	xx	xx	xx	xx
	(000's)	16,552	xx	xx	xx	xx	xx	xx
First aid training within last 3 years	%	21	18	34	19	4	12	15
	(000's)	4,059	1,748	1,482	436	91	328	1,128
CPR: able to perform (self-report)	%	34	29	44	36	21	31	28
	(000's)	6,609	2,907	1,911	842	504	868	2,049
Home safety devices: own smoke detector, extinguisher, first aid kit	%	35	xx	xx	xx	xx	25	35
	(000's)	6,923	xx	xx	xx	xx	695	2,565
Regular exercise: vigorous session 3+ times weekly for 15+ min. each	%	54	53	67	45	51	xx	49
	(000's)	10,649	5,284	2,881	1,076	1,252	xx	3,515
Blood pressure check: within prescribed period for age group	%	86	91	80	86	94	88	84
	(000's)	16,846	9,110	3,475	2,044	2,299	2,487	6,170
Pap smear: at least once	%	x	81	61	x	69	81	74
	(000's)	x	8,131	1,291	x	966	1,308	2,742
Breast examination: by a health professional within 12 months preceding survey	%	x	65	61	x	54	61	55
	(000's)	x	6,443	1,299	x	753	981	2,036
Breast self-exam at least every 2-3 months	%	x	56	41	x	48	53	52
	(000's)	x	5,614	865	x	672	846	1,917
Health information at work: some received (wage-earning population only)	%	47	46	32	51	xx	21	53
	(000's)	9,158	4,565	1,395	1,207	xx	591	3,906

xx not reported in Chapter, but available from the micro data tape
x not applicable

TABLE 2: **COMPARISON OF PROVINCIAL POPULATIONS BY RELATIVE PROPORTION OF POPULATION WHICH DEMONSTRATES SELECTED HEALTH CHARACTERISTICS AND SELF-CARE AND MUTUAL AID PRACTICES, AGE 15+, CANADA, 1985**

	CANADA %	NFLD	P.E.I.	N.S.	N.B.	QUE.	ONT.	MAN.	SASK.	ALTA.	B.C.	YUKON
	%											
1. Current smokers	34	+			−	+	−		− −		−	++
2. Support smoke-free work areas	82	++	+	+		− −					+	−
3. Current drinkers	81	−	− −	−	−	−	+				+	++
4. Former drinkers	10	+	+	+	++		− −					−
5. Average weekly consumption of drinks	5.1		− −		−						++	+
6. Tranquillizer users	6	− −	−	−		++		−	−	−	−	−
7. Marijuana or hashish users	6	+	−			− −				+	+	++
8. PAP smear within 12 months (women only)	56	−		−	− −				+	+	−	++
9. Breast examination within 12 months (women only)	65	− −	−	−	−	+				++		−
10. Monthly breasts self-examination (women only)	38	++			− −			+	−	+	−	
11. Driving after drinking any amount, last month	16	−	−	− −	−	−		+	+	+	+	++
12. Believe can drive safely after >3 drinks in 3 hours	52	+		− −				++	+	+	−	+
13. With friend or relative in past 12 months who had too much to drink to drive safely	33			−		− −			+	+		++
14. Attempted to stop person from driving when person person had too much too drink	76		−	−	−	+		−	− −		−	++
15. Always wear seatbelts	66		−	++	+		+		−	−	+	− −
16. Always use child restraints	84		−	++		−	+		−	−	+	− −
17. Know how to do CPR	34			−	−			− −	−	+	+	++
18. First aid training within 3 years	21		+			−	− −	+			+	++
19. Own a smoke detector	77	+	++		+	−		+		+	− −	
20. Aware of accident prevention program at work	58	−	−	− −	−		++	−	−	−		−
21. Exercise 3+ times per week	54	−	+	+	+	− −		+	+	+	+	++
22. Blood pressure measured within last 2 years	86	− −	−		−		++		−			
23. Support government role in health concerns	60	+		+	+	++	−	−	−	−		− −

++ highest prevalence
+ higher than Canadian average
( ) at or near Canadian average
− lower than Canadian average
− − lowest prevalence

TABLE 3: **PERCENTAGE OF POPULATION WHICH HOLDS HEALTHFUL ATTITUDES, BELIEFS AND INTENTIONS REGARDING HEALTH, AGE 15+, CANADA, 1985**

	Population	Women (15+)	Youth (15-24)	Middle-Age Men (45-64)	Elderly (65+)	Less Than High School Education (15+)
Total 15+ (000's)	19,611	9,989	4,337	2,371	2,446	7,173
ATTITUDES, BELIEFS AND INTENTIONS	%	%	%	%	%	%
"Non-smokers should have smoke-free areas at work"	82	84	86	77	81	xx
"Smokers should ask permission before lighting up"	81	86	81	78	84	xx
"Public concern with second-hand smoke is important"	56	57	52	57	64	xx
"Health promotion at work is appropriate (wage-earning population only)"	69	71	64	74	xx	65
"Government role in health issues is very appropriate"	60	66	59	57	56	59
"Intend to do something in coming year to improve health"	62	66	69	xx	40	55
"Children are more likely to smoke when their parents smoke"	70	68	75	67	63	67
"Pregnant women should not smoke"	91	92	94	87	85	89
"Quitting after 10 years of heavy smoking reduces risk of getting disease related to smoking"	32	31	27	34	23	xx
"Smoking does not promote weight control"	78	80	84	68	76	77
"Most non-smokers mind second-hand smoke"	73	74	73	68	72	70
"Believe can consume maximum 2 drinks in 3 hours without worrying about ability to drive"	48	65	40	48	71	xx
"Feel they do not exercise enough"	58	64	51	58	48	54
"Believe more exercise would be very beneficial"	27	28	38	12	13	xx
"Believe they should take action to improve physical health"	68	69	74	56	39	56

xx not reported in Chapter, but available from the micro data tape

APPENDICES

A

Effect of Standardization on Survey Results

Introduction

When presenting a population survey such as the HPS, a choice has to be made between presenting standardized or crude (non-standardized) data. Although it is a concern mainly with respect to analytical findings (e.g., the health status of different types of drinkers), standardization is also relevant to descriptive findings such as the presentation of provincial distributions, which may be influenced by differences in the structure of provincial populations.

One advantage of crude data is that they deal with observations and the resulting population estimates describe the situation as accurately as any sample can. Thus the tables throughout this report which provide provincial data describe, for example, the estimated number of smokers or drinkers who are to be found in each province. This seems to be the most appropriate way to present these primarily descriptive data.

The disadvantage of this form of presentation arises when one tries to explain the reasons for different provincial rates of the various health practices. For example, how much of Newfoundland's high smoking prevalence is due to the fact that this habit is more common among low-income people? How much of Ontario's high prevalence of driving after drinking arises from the positive association between alcohol consumption and income level? These questions can be answered with the HPS data, but further analysis will be necessary.

An argument in favour of crude data for provincial estimates is described in detail in the next section. This involves comparison of the crude and the standardized estimates for smoking and exercise, both of which are related to age, sex and socio-economic status. As it turns out, standardization makes little difference in the estimates for the oldest (Manitoba) and the youngest province (Alberta).

Since these assurances pertain mainly to provincial comparisons, the reader is cautioned to remember that the data throughout the report are not standardized. Thus, there may be relationships between health variables which would be altered if age, sex, and socio-economic status were held constant or adjusted for. Such instances are identified in the discussion accompanying such findings.

A comparison of crude and standardized data*

Method

Health practices are strongly related to age, but also to other variables such as education or income levels. Therefore, when comparing prevalence estimates for various sub-populations, the differences observed can, at least in part, be due to differences in age, sex, education, income and other structures.

In order to eliminate some of these structure effects, three sets of standardized estimates (for the prevalence of smoking and that of exercise) have been derived:

- age/sex standardized;
- age/sex/education standardized; and
- age/sex/income standardized.

The calculations have been done, by sex, for Canada and repeated for two provinces: Manitoba and Alberta, respectively the oldest and the youngest of the ten provinces, based on the 1981 Census results.

Results

The results (Tables A and B) have been obtained through direct standardization and can be compared to the crude estimates. The standard population used is the total Canadian population 15 years and over.

Overall, the structure effects examined have had a negligible influence, if any, on the prevalence estimates or their ranking. This is particularly true in the case of age/sex standardization.

When comparing crude and standardized estimates, the main differences are found in the case of age/sex/income standardization. But this is probably essentially due to the high non-response rate for the question on income: as a result the denominator for these latter estimates is quite different from that of other estimates found in Tables A and B.

* Prepared by Claude Strohmenger, Policy, Communications and Information Branch, Health and Welfare Canada.

TABLE A: **STANDARDIZED ESTIMATES OF THE PERCENTAGE OF CURRENT SMOKERS,[1] BY SEX, AGE 15+, CANADA, MANITOBA AND ALBERTA**

	Men			Women			Both Sexes		
Type of Standardization	**Can.**	**Man.**	**Alta.**	**Can.**	**Man.**	**Alta.**	**Can.[2]**	**Man.**	**Alta.**
None	35.6	37.2	35.4	32.1	32.1	30.8	33.8	34.6	33.1
Age/Sex	35.4	37.5	34.9	32.3	32.7	29.9	33.8	35.0	32.3
Age/Sex/Educ.	35.3	35.6	34.8	32.1	31.8	30.2	33.8	33.3	32.1
Age/Sex/Inc+	37.1	34.8	37.5	34.0	31.4	28.0	35.7	33.9	33.3

+ Denominator = only respondents to question on income.
1. i.e., those who answered "yes" to Q. 27.
2. Standard population: Canada total (excluding Northwest Territories).

TABLE B: **STANDARDIZED ESTIMATES OF THE PERCENTAGE PHYSICALLY ACTIVE,[1] BY SEX, AGE 15+, CANADA, MANITOBA AND ALBERTA**

	Men			Women			Both Sexes		
Type of Standardization	**Can.**	**Man.**	**Alta.**	**Can.**	**Man.**	**Alta.**	**Can.[2]**	**Man.**	**Alta.**
None	55.7	53.6	65.9	52.9	52.9	60.9	54.3	53.2	63.4
Age/Sex	55.6	53.0	65.7	53.1	52.8	60.9	54.3	53.0	63.3
Age/Sex/Educ.	54.9	53.1	65.0	52.5	53.0	60.0	54.3	52.9	62.5
Age/Sex/Inc+	54.5	52.4	64.8	53.2	52.6	57.9	53.4	50.8	61.0

+ Denominator = only respondents to question on income.
1. i.e., those who exercise at least 3 times a week (Q. 24).
2. Standard population: Canada total (excluding Northwest Territories).

B

Health Promotion Survey Questionnaire

Statistics Canada Statistique Canada

HEALTH PROMOTION SURVEY

Telephone Number ___ - ___ - ____ Hnd Page – Line No. ___

First I would like to ask you a few questions about your health.

1. **In general, compared to other persons your age would you say your health is...**

   [1] Excellent
   [2] Very good
   [3] Good
   [4] Fair
   [5] Poor

2. **Do you agree or disagree with the following statement? Compared to most people my age I make more of an effort to improve my health.**

   [6] Agree
   [7] Disagree
   [8] No opinion

3. **Do you think there is anything you personally should do to improve your physical health?**

   [1] Yes [2] No → Go to 6

4. **What is the most important thing you personally should do?**

   [3] Exercise more
   [4] Improve eating habits
   [5] Lose weight
   [6] Stop smoking
   [7] Reduce drug use/medications
   [8] Cut down on drinking
   [9] Other (specify) _____

5. **Is there anything stopping you from making this improvement? (Mark all that apply)**

   [01] No
   [02] Problem not serious, no urgency
   [03] Lack of time
   [04] Lack of self discipline, energy
   [05] Too depressed
   [06] Don't know how to get started, lack knowledge
   [07] Peer pressure
   [08] Lack of support from family or friends
   [09] Don't want to change current habits
   [10] Too difficult
   [11] Too costly
   [12] Other (specify) _____

6. **Do you think there is anything you personally should do to improve the way you cope with stress?**

   [1] Yes [2] No → Go to 9

7. **What is the most important thing you think you should do? (Mark only most important)**

   [1] Exercise more
   [2] Learn to relax, worry less
   [3] Get out more often, make new friends, socialize
   [4] Change jobs, move, leave home, change situation
   [5] Reduce drug use/medications
   [6] Reduce alcohol use
   [7] Spend more time with family and close friends
   [8] Other (specify) _____

8. **Is there anything stopping you from making this improvement?**

   [01] No
   [02] Problem not serious, no urgency
   [03] Lack of time
   [04] Lack of self discipline, energy
   [05] Too depressed
   [06] Don't know how to get started, lack knowledge
   [07] Peer pressure
   [08] Lack of support from family or friends
   [09] Don't want to change current habits
   [10] Too difficult
   [11] Too costly
   [12] Other (specify) _____

9. **In general would you say you're...**

   [1] Very happy
   [2] Pretty happy
   [3] Not too happy

10. **Would you describe your life as...**

    [4] Very stressful
    [5] Fairly stressful
    [6] Not very stressful
    [7] Not at all stressful

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11. Are there health topics about which you feel you need more information?

[8] ○ Yes [9] ○ No ——→ Go to 13

12. On which of the following health topics do you feel you need more information?

	Yes	No
Nutrition	01 ○	02 ○
High blood pressure	03 ○	04 ○
Mental health	05 ○	06 ○
Smoking	07 ○	08 ○
Alcohol	09 ○	10 ○
Marijuana	11 ○	12 ○
Safety and accident prevention	13 ○	14 ○

The next few questions are about your current physical condition.

13. How tall are you without shoes?

1 [ ][ ] feet / inches or 2 [ ][ ][ ] centimetres

14. How much do you weigh?

3 [ ][ ][ ] pounds or 4 [ ][ ][ ] kilograms

15. How much would you like to weigh?

5 [ ][ ][ ] pounds or 6 [ ][ ][ ] kilograms

[7] ○ Don't know

16. Are you limited in the kind or amount of activity you can do because of a long term physical condition or health problem? By long term I mean a condition that has lasted or is expected to last more than 6 months.

[1] ○ Yes [2] ○ No ——→ Go to 18

17. Are your activities limited . . .

	Yes	No
At home	[3] ○	[4] ○
At work or school	[5] ○	[6] ○
In other activities such as leisure time pursuits or transportation to or from work	[7] ○	[8] ○

18. When did you last have your blood pressure checked?

[1] ○ Last 6 months
[2] ○ 6-12 months
[3] ○ One to two years
[4] ○ More than 2 years
[5] ○ Never
[6] ○ Don't know } Go to 22

19. As far as you know is your blood pressure high?

[7] ○ Yes
[8] ○ No
[9] ○ Don't know } Go to 22

20. Are you currently doing anything to control your blood pressure?

[1] ○ Yes [2] ○ No ——→ Go to 22

21. What are you doing? (Mark all that apply)

01 ○ Medication
02 ○ Quit smoking
03 ○ Exercise
04 ○ Weight loss
05 ○ Sodium restriction
06 ○ Other diet change
07 ○ Relaxation
08 ○ Reduce alcohol use
09 ○ Other (specify) _____
10 ○ Don't know

22. Do you agree or disagree with the following statement? You only need to have your blood pressure checked if you think you have a problem.

[1] ○ Agree
[2] ○ Disagree
[3] ○ No opinion

The next few questions are about exercise.

23. Exercise includes vigorous activities such as calisthenics, jogging, racquet sports, team sports, dance classes, or brisk walking. Do you feel you get as much exercise as you need or less than you need?

[4] ○ As much as needed
[5] ○ Less than needed
[6] ○ Don't know

24. How many times per week do you exercise for at least 15 minutes?

[1] ○ Daily
[2] ○ 5-6 times a week
[3] ○ 3-4 times a week
[4] ○ 1-2 times a week
[5] ○ Less than once a week
[6] ○ Never
[7] ○ Don't know

25. Would you say you are physically more active, about the same or less active than other persons your age?

[1] ○ More active
[2] ○ About the same
[3] ○ Less active
[4] ○ Don't know

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26. Do you think that getting more exercise would improve your health...

[5] A great deal
[6] A moderate amount
[7] A little
[8] Not at all
[9] Don't know

The next few questions are about smoking.

27. At the present time do you smoke cigarettes?

[1] Yes [2] No → Go to 31

28. Do you smoke cigarettes regularly, that is usually everyday or occasionally, not every day?

[3] Regularly [4] Occasionally

29. In the past year has anyone asked you to not smoke around them?

[5] Yes [6] No → Go to 31

30. Where has this happened? Anywhere else? (Mark all that apply)

[1] At school
[2] At work
[3] In a car
[4] Restaurant
[5] In your own home
[6] In a house other than your own
[7] Other (specify) _____

31. Now I'd like your opinion on some statements about smoking. Tell me whether you agree or disagree with each of the following?

	Agree	Disagree	No opinion
Children are more likely to start smoking if their parents smoke	01	02	03
People are too concerned about the effect on their health of other people smoking	04	05	06
Most non-smokers don't mind when people smoke in their presence	07	08	09
Women should not smoke during pregnancy	10	11	12
Non-smokers should be provided with a smoke-free area where they work	13	14	15
Smokers should ask permission before smoking in the presence of others	16	17	18
Smoking helps you stay slim	19	20	21

32. Do you think that a person who quits after ten years of heavy smoking reduces the risk of getting a disease related to smoking...

[1] A great deal
[2] A moderate amount
[3] A little bit
[4] Not at all
[5] Don't know

33. Do you ever feel unpleasant effects from the cigarette smoke of others?

[6] Yes [7] No

34. Have you ever asked someone not to smoke?

[8] Yes [9] No → Go to 36

35. Where was that? Anywhere else? (Mark all that apply)

[1] In restaurant
[2] At work
[3] At school
[4] In a car
[5] Public transportation (bus, airplane)
[6] In your own home
[7] In a house other than your own
[8] Other (specify) _____

Now I would like to ask some questions about alcohol consumption.

36. In the next questions when we use the word drink it means:

One bottle of beer or glass of draft
One small glass of wine
One shot or mixed drink with hard liquor

Have you ever taken a drink of beer, wine, liquor or other alcoholic beverage?

[1] Yes [2] No → Go to 44

37. In the past 12 months, have you taken a drink of beer, wine, liquor or other alcoholic beverage?

[3] Yes [4] No → Go to 44

38. During the past 12 months, how often, on average, did you drink alcoholic beverages? Was it...

[1] Every day
[2] 4-6 times a week
[3] 2-3 times a week
[4] Once a week
[5] Once or twice a month
[6] Less often than once a month

39. (a) **Thinking back over the past 7 days, on how many of these days did you have any alcoholic drinks?**

[ ] [88] None → Go to 40

(b) **On how many of these days did you have 2 or more drinks?**

[ ] [88] None → Go to 40

(c) **On how many of these days did you have 4 or more drinks?**

[ ] [88] None → Go to 40

(d) **On how many of these days did you have 8 or more drinks?**

[ ] [88] None → Go to 40

(e) **On how many of these days did you have 12 or more drinks?**

[ ] [88] None

40. **Would you say that this is more, less or about the same amount that you usually consume during a week?**

[1] More
[2] Less
[3] Same

41. **During the past month how many times have you driven within two hours after drinking any amount of alcohol?**

[,]

[88] Don't drive → Go to 44
[99] Don't know

42. **About how many drinks can <u>you</u> have, over a 3 hour period, before <u>you</u> would worry about your ability to drive?**

[,]

[99] Don't know

43. **There is a legal limit to the amount of alcohol <u>you</u> can have in your blood when driving. How many drinks do you think <u>you</u> can have over a period of three hours before you are over the legal limit?**

[,]

[99] Don't know

44. **In the past 12 months, have you been with a friend or relative whom you thought had too much to drink to drive safely?**

[5] Yes
[6] No
[7] Don't know } Go to 47

45. **On the most recent occasion did you attempt to prevent this person from driving?**

[8] Yes [9] No → Go to 47

46. **What did you do?** (Mark all that apply)

[1] Drove them home yourself
[2] Asked someone to drive them home
[3] Asked them to take a taxi
[4] Hid their car keys
[5] Served coffee
[6] Kept the person at your home
[7] Other (specify) _____

47. **How many drinks do you think a person can have per week, without endangering his/her health over the long term?**

[,]

[99] Don't know

48. **Now I'd like your opinion on some statements about drinking. Please tell me, whether you agree or disagree?**

	Agree	Dis-agree	No opinion
Moderate drinking can be good for your health	[01]	[02]	[03]
On social occasions I often feel obligated to have a drink, even when I would rather not	[04]	[05]	[06]
Most drinkers do not suffer health problems as a result of their drinking	[07]	[08]	[09]
Most people don't mind if you get intoxicated once in a while	[10]	[11]	[12]
I'd rather pay for a taxi than see a friend drive after drinking	[13]	[14]	[15]

Now I would like to ask about your use of drugs.

49. **In the past 12 months have you used:**

Sleeping pills?	[01]	Yes
	[02]	No
Pep pills, stimulants?	[03]	Yes
	[04]	No
Tranquilizers such as valium?	[05]	Yes
	[06]	No
Cocaine?	[07]	Yes
	[08]	No
Marijuana or hashish?	[09]	Yes
	[10]	No

50. **Do you think that occasional use of marijuana will affect a persons' physical or mental health?**

[4] Yes
[5] No
[6] Don't know } Go to 52

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51. What effects do you think it would have? (Mark all that apply)

- 01 ○ Relaxation or other positive effects
- 02 ○ Addiction/leads to harder drugs
- 03 ○ Memory loss, brain damage
- 04 ○ Other mental or behavioral effects
- 05 ○ Lung damage
- 06 ○ Genetic problems/sterility
- 07 ○ Other physical health problems
- 08 ○ Increase/risk of accidents or injury
- 09 ○ Other (specify) _____
- 10 ○ Don't know

The next few questions are about safety.

52. On average, about how many miles or kilometres per week do you travel in a private vehicle . . .

As a driver?

1 [ ][ ][ ][ ] miles or 2 [ ][ ][ ][ ] kilometres

- 3 ○ Don't know

53. On average, about how many miles or kilometres per week do you travel in a private vehicle . . .

As a passenger?

4 [ ][ ][ ][ ] miles or 5 [ ][ ][ ][ ] kilometres

- 6 ○ Don't know

54. How often do you use seatbelts when you ride in a car? (Read responses)

- 1 ○ Always
- 2 ○ Most of the time
- 3 ○ Sometimes
- 4 ○ Rarely or never

55. When you are driving a car do you insist that the children with you have their seatbelt fastened or are in carseats? (Read responses)

- 1 ○ Always
- 2 ○ Most of the time
- 3 ○ Sometimes
- 4 ○ Rarely or never
- 5 ○ Don't drive
- 6 ○ Don't drive with children in car

56. In the past 3 years have you taken any training to administer first aid?

7 ○ Yes 8 ○ No

57. Can you administer cardio-pulmonary resuscitation, sometimes called CPR?

1 ○ Yes 2 ○ No

58. Would you agree or disagree with the following statement? It is worth learning CPR even though few people ever have to use it.

- 3 ○ Agree
- 4 ○ Disagree
- 5 ○ No opinion

59. Do you have the following in your home?

	Yes	No
A first aid kit	1 ○	2 ○
A smoke detector	3 ○	4 ○
A fire extinguisher	5 ○	6 ○

60. Interviewer check item:

Respondent is: Female 7 ○ → Go to 61
Male 8 ○ → Go to 66

The next questions are about health practices.

61. In the past 12 months have you had your breasts examined by a doctor or nurse?

1 ○ Yes 2 ○ No

62. Have you ever been shown how to examine your breasts?

3 ○ Yes 4 ○ No

63. How often do you examine your own breasts? Would you say . . .

- 5 ○ At least once a month
- 6 ○ Once every 2-3 months
- 7 ○ Less often
- 8 ○ Never

64. How often do you think a woman should examine her own breasts?

- 1 ○ At least once a month
- 2 ○ Once every 2-3 months
- 3 ○ Less often
- 4 ○ Never
- 5 ○ Don't know

65. When was the last time you had a PAP smear test for cancer?

- 1 ○ Within the past year
- 2 ○ Last 2-3 years
- 3 ○ More than 3 years
- 4 ○ Never
- 5 ○ Don't know

The next few questions are about social relationships.

66. About how many people, including relatives, do you consider to be your friends, that is, people you see socially on a regular basis?

[ ]

67. Of the people you see socially how many smoke cigarettes? (Read responses)

1○ None
2○ A few
3○ About half
4○ Most or all
5○ Don't know

68. How many would you say drink too much? (Read responses)

1○ None
2○ A few
3○ About half
4○ Most or all
5○ Don't know

69. How many of your friends use marijuana regularly? (Read responses)

1○ None
2○ A few
3○ About half
4○ Most or all
5○ Don't know

70. How many of your friends exercise regularly? (Read responses)

1○ None
2○ A few
3○ About half
4○ Most or all
5○ Don't know

71. How many do you consider to be your close friends, that is, people you could talk to if you needed help or had a problem? (Read responses)

1○ None
2○ A few
3○ About half
4○ Most or all
5○ Don't know

72. What is your current marital status?

1○ Married (including common-law)
2○ Single/never married
3○ Separated
4○ Divorced
5○ Widowed

} Go to 74

73. Does your spouse do any of the following?

	Yes	No
Exercise regularly	01○	02○
Smoke cigarettes	03○	04○
Drink too much	05○	06○
Overeat	07○	08○
Use tranquilizers such as valium	09○	10○
Smoke marijuana	11○	12○

The next questions are about nutrition.

74. In the last week on how many days did you have the following for breakfast?

Nothing or just coffee or tea [ ]
Eggs, bacon, ham or other meat [ ]
Breads, pastries, pancakes or cereals [ ]
Fruit or juice [ ]
Cheese, milk or other dairy products [ ]

75. Are there any foods which you think you should limit or avoid, for the sake of your health?

1○ Yes 2○ No ——→ Go to 77

76. Of the following types of food, which one do you feel is the most important to limit or avoid for the sake of your health? Food that is...

3○ High in cholesterol
4○ High in fat
5○ High in sugar
6○ High in salt
7○ Don't know

77. Are there any foods which you think you should eat more often for the sake of your health?

8○ Yes 9○ No ——→ Go to 79

78. Of the following types of food, which one do you feel is the most important to eat more often for the sake of your health? Foods such as...

1○ Fruits and vegetables
2○ Whole grain cereals
3○ Milk and milk products
4○ Meat/fish/poultry
5○ Don't know

79. I will now read a list of health topics. For each one I'd like your opinion about how important you feel it is for the government to deal with each topic. Tell me on a scale from 1 to 10; with 1 being not at all important and 10 being extremely important.

	Not at all important 1	2	3	4	5	6	7	8	9	*Extremely important* 10	*Don't know*
Drug use	01○	02○	03○	04○	05○	06○	07○	08○	09○	10○	11○
Smoking	12○	13○	14○	15○	16○	17○	18○	19○	20○	21○	22○
Alcohol problems	23○	24○	25○	26○	27○	28○	29○	30○	31○	32○	33○
High blood pressure	34○	35○	36○	37○	38○	39○	40○	41○	42○	43○	44○
Child health	45○	46○	47○	48○	49○	50○	51○	52○	53○	54○	55○
Eating habits	56○	57○	58○	59○	60○	61○	62○	63○	64○	65○	66○
Mental health	67○	68○	69○	70○	71○	72○	73○	74○	75○	76○	77○
Accident prevention in the home	78○	79○	80○	81○	82○	83○	84○	85○	86○	87○	88○
Accident prevention at work	89○	90○	91○	92○	93○	94○	95○	96○	97○	98○	99○
Accident prevention on the road	100○	101○	102○	103○	104○	105○	106○	107○	108○	109○	110○

80. Do you agree or disagree with the following statements?

	Agree	Dis-agree	No opinion
Following a healthy diet is expensive and time consuming	1○	2○	3○
I'd rather be overweight than have to give up many of the foods I like	4○	5○	6○
Skipping breakfast is an effective way to control or reduce your weight	7○	8○	9○

81. Do you think that you could improve your health by changing your eating habits?

1○ Yes

2○ No

3○ Don't know

Finally a few questions about yourself.

82. What is the highest grade or level of education you have ever completed?

1○ No schooling

2○ Elementary

3○ Some } Secondary

4○ Completed }

5○ Some } Community college, technical college, CEGEP, nurse's training

6○ Completed }

7○ Some } University or teacher's college

8○ Completed }

9○ Other education or training

83. What language do you speak at home most often?

1○ English

2○ French

3○ Other

84. What is the postal code for this dwelling?

[ ][ ][ ] [ ][ ][ ] 4○ Don't know

85. How many telephones, counting extensions, are there in your dwelling?

1○ One ——→ Go to 90

2○ Two or more

86. Do all the telephones have the same number?

3○ No

4○ Yes ——→ Go to 90

87. How many different numbers are there?

[ ][ ]

88. Are any of these numbers for business use only?

5○ No ——→ Go to 90

6○ Yes

89. How many are for business use only?

[ ][ ]

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90. Which of the following best describes your main activity during the last 12 months? Were you mainly...

[1] ○ Working at a job or business → Go to 92

[2] ○ Looking for work → Go to 91

[3] ○ A student
[4] ○ Retired
[5] ○ Keeping house
[6] ○ Other (specify) _____
} Go to 96

91. Did you have a job at any time during the last 12 months?

[1] ○ Yes [2] ○ No → Go to 96

92. For whom do/did you work?

93. What kind of business, industry or service is/was that?

94. What kind of work do/did you do?

95. How many persons does this company employ? Include persons in all branch locations of the company. Are there...

[3] ○ Over 100
[4] ○ Between 50 and 100
[5] ○ Between 10 and 49
[6] ○ Under 10
[7] ○ Don't know

96. In the last five years have you been unemployed for a year or longer?

[1] ○ Yes [2] ○ No

97. Interviewer check item:

If code 1 in question 90 [3] ○ → Go to 98
Otherwise [4] ○ → Go to 104

98. Are you aware of any safety or accident prevention programs at your place of work?

[5] ○ Yes [6] ○ No [7] ○ Don't know

99. Are you aware of any other programs to improve health, physical fitness or good nutrition?

[1] ○ Yes [2] ○ No [3] ○ Don't know

100. In the past year, have you seen or received any information about health topics at your place of work? (e.g. posters, bulletin boards, pamphlets, etc.)

[4] ○ Yes [5] ○ No → Go to 102

101. Have you found the information helpful?

[6] ○ Yes [7] ○ No

102. Is smoking restricted in your place of work...

[1] ○ Completely
[2] ○ In certain places
[3] ○ Not at all
[4] ○ Don't know

103. Do you think your place of work is an appropriate place to promote good health habits?

[5] ○ Yes
[6] ○ No
[7] ○ Don't know

104. Do you think schools are an appropriate place to promote good health habits?

[1] ○ Yes
[2] ○ No
[3] ○ Don't know

105. What was your household's total income from all sources before taxes and deductions for 1984?

☐☐☐☐☐☐.00 [4] ○ Don't know

106. What is the single most important thing you have done in the past year to improve your health?

[01] ○ Nothing → Go to 109
[02] ○ Increased exercise
[03] ○ Lost weight
[04] ○ Improved eating habits
[05] ○ Quit smoking/reduced amount smoked
[06] ○ Reduced drug/medication use
[07] ○ Drank less alcohol
[08] ○ Had blood pressure checked
[09] ○ Attempted to control blood pressure
[10] ○ Learned to manage stress
[11] ○ Reduced stress level
[12] ○ Received medical treatment
[13] ○ Other (specify) _____

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107. **Aside from improving your health, was there any other reason that you decided to do this?**

[1] ○ Yes

[2] ○ No ——→ Go to 109

108. **What was the other reason?**

|_|_|_

C

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